ORDER NO. MD0802005CE
A6

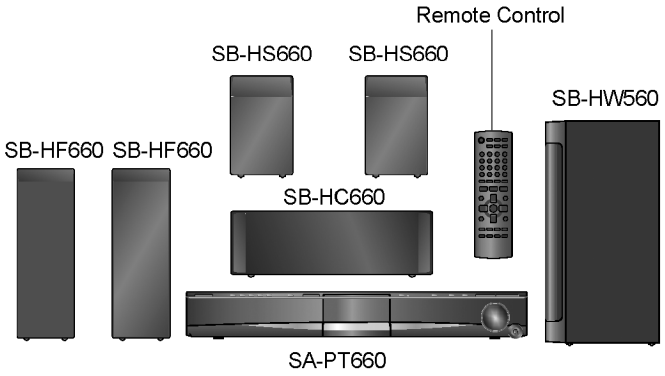
Service Manual

DVD Home Theater Sound System

SA-PT660P
SA-PT660PC

Colour

(K).....Black Type



Specifications

Main unit SA-PT660P/PC

●GENERAL

Power supply: AC 120 V, 60 Hz

Power consumption: This unit 135 W

Power consumption in standby mode:
approx. 0.3 W

Dimensions (W×H×D): 430 mm×63 mm×327 mm(16-15/16" X 2-15/32" X 12-7/8")

Mass: This unit 3.7 kg (8.2lbs)

Operating temperature range: +0 °C to +40 °C
(+32 °F to +104 °F)

Operating humidity range: 35 % to 80 % RH
(no condensation)

●AMPLIFIER SECTION

RMS Output Power: Dolby Digital Mode

Front Ch:
125 W per channel (3 Ω), 1 kHz, 10% THD

Surround Ch:
125 W per channel (3 Ω), 1 kHz, 10% THD

Center Ch:
250 W per channel (6 Ω), 1 kHz, 10% THD

Subwoofer Ch:
250 W per channel (6 Ω), 100 Hz, 10 % THD

Total RMS Dolby Digital mode power:
1000 W

FTC Output Power: Dolby Digital Mode

Front Ch:
63 W per channel (3 Ω), 120Hz to 20 kHz, 1% THD

Surround Ch:
34 W per channel (3 Ω), 120Hz to 20 kHz, 1% THD

Center Ch:
113 W per channel (6 Ω), 120Hz to 20 kHz, 1% THD

Subwoofer Ch:
121 W per channel (6 Ω), 45 Hz to120 Hz, 1 % THD

Total FTC Dolby Digital mode power:
428 W

●FM TUNER, TERMINALS SECTION

Preset Memory: FM 30 stations
AM 30 stations

Frequency Modulation (FM)

Frequency range:
87.90-107.90 MHz (200-kHz step)
87.50-108.00 MHz (100-kHz step)

Panasonic®

© 2008 Matsushita Electric Industrial Co. Ltd.. All rights reserved. Unauthorized copying and distribution is a violation of law.

Antenna terminals: 75 Ω (unbalanced)

Amplitude Modulation (AM)

520kHz to 1710kHz (10-kHz step)

Digital audio input

Optical digital input: Optical terminal

Sampling frequency: 32 kHz, 44.1 kHz, 48 kHz

Phone jack

Terminal: Stereo, 3.5 mm (1/8") jack

●DISC SECTION

Discs played [8 cm (3") or 12 cm (5")]:

(1) DVD (DVD-Video)

(2) DVD-RAM (DVD-VR, MP3[*2, 5], JPEG[*4, 5])

(3) DVD-R (DVD-Video, DVD-VR, MP3[*2, 5], JPEG[*4, 5])

(4) DVD-R DL (DVD-Video, DVD-VR)

(5) DVD-RW (DVD-Video, DVD-VR, MP3[*2, 5], JPEG[*4, 5])

(6) +R/+RW (Video)

(7) +R DL (Video)

(8) CD, CD-R/RW [CD-DA, Video CD, SVCD[*1], MP3[*2, 5], WMA[*3, 5], JPEG[*4, 5]]

[*1] Conforming to IEC62107

[*2] MPEG-1 Layer 3, MPEG-2 Layer 3

[*3] Windows Media Audio Ver.9.0 L3

●Not compatible with Multiple Bit Rate (MBR)

[*4] Exif Ver 2.1 JPEG Baseline files

●Picture resolution: between 160 x 120 and 6144 x 4096 pixels (Sub sampling is 4:0:0, 4:2:0, 4:2:2 or 4:4:4). Extremely long and narrow pictures may not be displayed.

[*5] The total combined maximum number of recognizable audio and picture contents and groups: 4000 audio and picture contents and 400 groups.

Pick up

Wavelength (DVD/CD): 655/785 nm

Laser power (DVD/CD): CLASS 1/CLASS 1M (Canada)
CLASS II/CLASS I (U.S.A)

Audio output (Disc)

Number of channels: 5.1 ch (FL, FR, C, SL, SR, SW)

●VIDEO SECTION

Video system: NTSC

Composite video output

Output level: 1 Vp-p (75 Ω)

Terminal: Pin jack (1 system)

Component Video Output

●Y output level: 1 Vp-p (75 Ω)

●P_B output level: 0.7 Vp-p (75 Ω)

●P_R output level: 0.7 Vp-p (75 Ω)

●Terminal: Pin jack (Y: green, P_B: blue, P_R: red) (1 system)

HDMI AV output

Terminal: 19pin type A connector

HDAVI Control:

This unit supports "HDAVI Control 3" function.

Note:

1. Specifications are subject to change without notice.
   Mass and dimensions are approximate.
2. Total harmonic distortion is measured by the digital spectrum analyzer.

Solder:

This model uses lead free solder (PbF).

Mechanism:

This model uses CR14 mechanism.

Wireless Features (optional):

This model supports multi-room wireless sound system (eg.SH-FX85).

System	SC-PT660P/PC-K
Main unit	SA-PT660P/PC-K
Front speakers	SB-HF660P-K*1
Surround speakers	SB-HS660P-K*1
Center speaker	SB-HC660P-K*1
Subwoofer speaker	SB-HW560E-K*1

Refer to their respective original service manuals for *1.

Manufactured under license from Dolby Laboratories.
Dolby, Pro Logic, and the double-D symbol are trademarks of Dolby Laboratories.

"DTS" and "DTS Digital Surround" are registered trademarks of DTS, Inc.

U.S. Patent Nos. 6,836,549; 6,381,747; 7,050,698; 6,516,132; and 5,583,936.

This product incorporates copyright protection technology that is protected by U.S. patents and other intellectual property rights. Use of this copyright protection technology must be authorized by Macrovision, and is intended for home and other limited viewing uses only unless otherwise authorized by Macrovision. Reverse engineering or disassembly is prohibited.

Windows Media and the Windows logo are trademarks or registered trademarks of Microsoft Corporation in the United States and/or other countries.

This product is protected by certain intellectual property rights of Microsoft Corporation and third parties. Use or distribution of such technology outside of this product is prohibited without a license from Microsoft or an authorized Microsoft subsidiary and third parties.

WMA is a compression format developed by Microsoft Corporation. It achieves the same sound quality as MP3 with a file size that is smaller than that of MP3.

HDMI, the HDMI logo and High-Definition Multimedia Interface are trademarks or registered trademarks of HDMI Licensing LLC.

HDAVI Control™ is a trademark of Matsushita Electric Industrial Co., Ltd.

VIERA Link™ is a trademark of Matsushita Electric Industrial Co., Ltd.

EZ Sync™ is a trademark of Matsushita Electric Industrial Co., Ltd.

iPod is a trademark of Apple Inc., registered in the U.S. and other countries.

■ **Built-in decoders**
You can play discs with these symbols.

⚠ WARNING

This service information is designed for experienced repair technicians only and is not designed for use by the general public.
It does not contain warnings or cautions to advise non-technical individuals of potential dangers in attempting to service a product.
Products powered by electricity should be serviced or repaired only by experienced professional technicians. Any attempt to service or repair the product or products dealt with in this service information by anyone else could result in serious injury or death.

CONTENTS

Page

1 Safety Precautions 5
1.1. GENERAL GUIDELINES 5
1.2. Before Repair and Adjustment 5
1.3. Protection Circuitry 6
1.4. Safety Parts Information 6
2 Prevention of Electrostatic Discharge (ESD) to Electrostatically Sensitive (ES) Devices 8
3 Precaution of Laser Diode 9
4 About Lead Free Solder (PbF) 10
4.1. Service caution based on legal restrictions 10
5 Handling Precautions for Traverse Unit 11
5.1. Cautions to Be Taken in Handling the Optical Pickup Unit 11
5.2. Grounding for electrostatic breakdown prevention 11
6 Accessories 13
7 Operation Procedures 14
7.1. Remote Control Key Buttons Operations 14
7.2. Main Unit Key Buttons Operations 15
7.3. Using the VIERA Link “HDAVI Control™” 16
7.4. Using the iPod 18
7.5. Audio and Video Connection 20
7.6. Disc Information 22
8 Self-Diagnosis and Special Mode Setting 24
8.1. Service Mode Summary Table 24
8.2. Service Mode Table (For DVD) 24
8.3. Service Mode Table (For CR14) 32
8.4. Wireless Service Mode Summary Table 34
8.5. Service Mode Table (Wireless) 35
8.6. DVD Self Diagnostic Function-Error Code 37
8.7. Sales Demonstration Lock Function 41
8.8. Service Precautions 42
9 Assembling and Disassembling 44
9.1. Disassembly Flow Chart 46
9.2. Main Components and P.C.B. Locations 47
9.3. Disassembly of Top Cabinet 48
9.4. Disassembly of Rear Panel 48
9.5. Disassembly of DVD Mechanism Unit 48
9.6. Disassembly of Front Panel 49
9.7. Disassembly of Panel P.C.B. 50
9.8. Disassembly of Power/Disc Button P.C.B. 50
9.9. Disassembly of DVD Lid 50
9.10. Disassembly of Ipod Cradle P.C.B. 51
9.11. Disassembly of AC Inlet P.C.B. 52
9.12. Disassembly of Main P.C.B. 53
9.13. Disassembly of D-Amp P.C.B. 54

Page

9.14. Replacement of Digital Amp IC (IC5000) 55
9.15. Replacement of Digital Amp IC (IC5200) 56
9.16. Replacement of Digital Amp IC (IC5300) 57
9.17. Replacement of Digital Amp IC (IC5400) 59
9.18. Disassembly of SMPS P.C.B. 60
9.19. Replacement of Switch Regulator IC (IC5701) 60
9.20. Replacement of Switch Regulator Diode (D5702) 61
9.21. Replacement of Regulator Diode (D5801) 63
9.22. Replacement of Regulator Diode (D5802) 63
9.23. Replacement of Regulator Diode (D5803) 64
9.24. Disassembly of Power Supply P.C.B. 65
9.25. Replacement of Regulator IC (IC2903) 66
9.26. Disassembly of DVD Module P.C.B. 67
9.27. Disassembly of Coprocessor P.C.B. 68
9.28. Disassembly of Wireless Adapter P.C.B. 68
10 Assembling and Disassembling of DVD Mechanism Unit 70
10.1. Disassembling of TRV unit 70
10.2. Assembly of TRV unit 70
11 Service Fixture and Tools 72
12 Service Position 73
12.1. Checking & Repairing Main P.C.B. 73
12.2. Checking & Repairing D-Amp P.C.B. 73
12.3. Checking & Repairing SMPS P.C.B. 75
12.4. Checking & Repairing Power Supply P.C.B. 75
12.5. Checking & Repairing DVD Module P.C.B. 76
13 Measurements and Adjustments 79
13.1. Service Tools and Equipment 79
13.2. Important points in adjustment 79
13.3. Storing and handling of test discs 79
13.4. Optical adjustment 80
14 Voltage and Waveform Chart 81
14.1. DVD Module P.C.B. 81
14.2. D-Amp P.C.B. 83
14.3. Main P.C.B. 84
14.4. Panel P.C.B. 85
14.5. Power Supply P.C.B. 85
14.6. SMPS P.C.B. 86
14.7. Waveform Chart 87
15 Illustration of IC’s, Transistors and Diodes 90
16 Wiring Connection Diagram 91
17 Block Diagram 93
17.1. System Control 93
17.2. DVD (Servo) 94
17.3. DVD (Audio) 95
17.4. DVD (HDMI) 96

17.5. VIDEO 97
17.6. Audio 98
17.7. Digital Audio Amp 99
17.8. Power 100
18 Schematic Diagram Notes 101
19 Schematic Diagram 103
19.1. DVD Module Circuit 103
19.2. Main Circuit 108
19.3. Panel, Power/Disc Button Circuit 112
19.4. D-Amp Circuit 113
19.5. Power Supply Circuit 115
19.6. SMPS Circuit 117
19.7. AC Inlet, Ipod Cradle Circuit 119
19.8. Coprocessor, Wireless Adapter Circuit 120
20 Printed Circuit Board 121
20.1. DVD Module P.C.B. 121
20.2. Main P.C.B. 122
20.3. Panel, Power/Disc Button, Power Supply & AC Inlet P.C.B. 123
20.4. D-Amp P.C.B. 124
20.5. SMPS P.C.B. 125
20.6. Ipod Cradle, Coprocessor & Wireless Adapter P.C.B. 126
21 Basic Troubleshooting Guide 127
21.1. Troubleshooting Guide for F61 and/or F76 127
21.2. Basic Troubleshooting Guide for Traverse Unit (DVD Module P.C.B.) 133
21.3. Basic Troubleshooting Guide for HDMI AV Output 134
22 Overall Simplified Block for PT660 137
22.1. SMPS Module & Power Supply Block 138
23 Terminal Function of ICs 139
23.1. IC2001 (RFKWPT760P): IC System Control 139
23.2. IC1701 (MFI341S2095): IC Ipod Video 139
23.3. IC6901(C0HBB0000057): IC FL Driver 140
24 Exploded Views 141
24.1. Cabinet Parts Location 141
24.2. Packaging 142
25 Replacement Parts List 143
25.1. Component Parts List 144
26 Schematic Diagram for printing with letter size 159

1 Safety Precautions

1.1. GENERAL GUIDELINES

1. When servicing, observe the original lead dress. If a short circuit is found, replace all parts which have been overheated or damaged by the short circuit.
2. After servicing, see to it that all the protective devices such as insulation barriers, insulation papers shields are properly installed.
3. After servicing, carry out the following leakage current checks to prevent the customer from being exposed to shock hazards.

1.1.1. LEAKAGE CURRENT COLD CHECK

1. Unplug the AC cord and connect a jumper between the two prongs on the plug.
2. Measure the resistance value, with an ohmmeter, between the jumpered AC plug and each exposed metallic cabinet part on the equipment such as screwheads, connectors, control shafts, etc. When the exposed metallic part has a return path to the chassis, the reading should be between 1MΩ and 5.2MΩ.
   When the exposed metal does not have a return path to the chassis, the reading must be ∞

1.1.2. LEAKAGE CURRENT HOT CHECK

1. Plug the AC cord directly into the AC outlet. Do not use an isolation transformer for this check.
2. Connect a 1.5kΩ, 10 watts resistor, in parallel with a 0.15µF capacitors, between each exposed metallic part on the set and a good earth ground such as a water pipe, as shown in **Figure 1**.
3. Use an AC voltmeter, with 1000 ohms/volt or more sensitivity, to measure the potential across the resistor.
4. Check each exposed metallic part, and measure the voltage at each point.
5. Reverse the AC plug in the AC outlet and repeat each of the above measurements.
6. The potential at any point should not exceed 0.75 volts RMS. A leakage current tester (Simpson Model 229 or equivalent) may be used to make the hot checks, leakage current must not exceed 1/2 milliamp. In case a measurement is outside of the limits specified, there is a possibility of a shock hazard, and the equipment should be repaired and rechecked before it is returned to the customer.

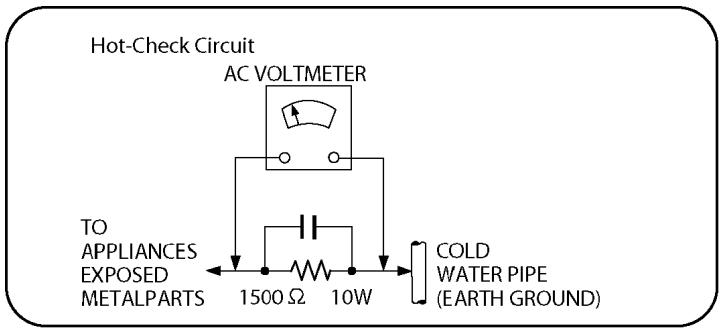


Figure 1

1.2. Before Repair and Adjustment

Disconnect AC power to discharge unit AC Capacitors as such C5700, C5701, C5703, C5704, C5705 through a 10 Ω, 10 W resistor to ground.

Caution:

DO NOT SHORT-CIRCUIT DIRECTLY (with a screwdriver blade, for instance), as this may destroy solid state devices.

After repairs are completed, restore power gradually using a variac, to avoid overcurrent.

Current consumption at AC 120 V, 60 Hz in NO SIGNAL mode volume minimal should be ~ 900 mA.

1.2.1. Caution for fuse replacement

(For English)
CAUTION:

Replace with the same type fuse:
(Manufacturer: LITTELFUSE, INC, Type: 233, F1, 8A, 125V)

(For Canadian French)
ATTENTION:

Utiliser un fusible de rechange de mme type:
(Manufacturer: LITTELFUSE, INC, Type: 233, F1, 8A, 125V)

1.3. Protection Circuitry

The protection circuitry may have operated if either of the following conditions are noticed:

- No sound is heard when the power is turned on.
- Sound stops during a performance.

The function of this circuitry is to prevent circuitry damage if, for example, the positive and negative speaker connection wires are "shorted", or if speaker systems with an impedance less than the indicated rated impedance of the amplifier are used.

If this occurs, follow the procedure outlines below:

1. Turn off the power.
2. Determine the cause of the problem and correct it.
3. Turn on the power once again after one minute.

Note:

When the protection circuitry functions, the unit will not operate unless the power is first turned off and then on again.

1.4. Safety Parts Information

Safety Parts List:

There are special components used in this equipment which are important for safety.
These parts are marked by ⚠ in the Schematic Diagrams & Replacement Parts List. It is essential that these critical parts should be replaced with manufacturer's specified parts to prevent shock, fire or other hazards. Do not modify the original design without permission of manufacturer.

Table 1

Ref. No.	Part No.	Part Name & Description	Remarks
12	REXX0640-J	BLACK WIRE (AC TO SMPS)	[M] ⚠
13	REXX0641-J	RED WIRE (AC TO SMPS)	[M] ⚠
23	RGRX0067KA1A	REAR PANEL	[M] P ⚠
23	RGRX0067K-B1	REAR PANEL	[M] PC ⚠
66	RKMX0141-K	TOP CABINET	[M] ⚠
84	J0KD00000126	FERRITE CORE	[M] ⚠
PCB3	REPX0622A	SMPS P.C.B	[M] (RTL) ⚠
PCB4	REPX0622A	AC INLET P.C.B	[M] (RTL) ⚠
DZ5701	ERZV10V511CS	ZNR	[M] ⚠
T2900	G4D1A0000117	SWITCHING TRANSFORMER	[M] ⚠
T5701	ETS42BM18GAD	SWITCHING TRANSFORMER	[M] ⚠
T5751	ETS19AB256AG	SWITCHING TRANSFORMER	[M] ⚠
PC5701	B3PBA0000402	PHOTO COUPLER	[M] ⚠
PC5702	B3PBA0000402	PHOTO COUPLER	[M] ⚠
PC5720	B3PBA0000402	PHOTO COUPLER	[M] ⚠
PC5799	B3PBA0000402	PHOTO COUPLER	[M] ⚠
F1	K5D802APA008	FUSE	[M] ⚠
FP2901	K5G401A00008	FUSE PROTECTOR	[M] ⚠
TH5701	D4CAA5R10001	THERMISTOR	[M] ⚠
TH5860	D4CC11040013	THERMISTOR	[M] ⚠
P5701	K2AB2B000010	AC INLET	[M] ⚠
A2	K2CB2CB00021	AC CORD	[M] ⚠
C5700	F1BAF1020020	1000pF	[M] ⚠
C5701	F0CAF334A087	0.33uF	[M] ⚠
C5703	F0CAF224A085	0.22uF	[M] ⚠
C5704	F1BAF1020020	1000pF	[M] ⚠

Ref. No.	Part No.	Part Name & Description	Remarks
C5705	F1BAF1020020	1000pF	[M] ⚠

2 Prevention of Electrostatic Discharge (ESD) to Electrostatically Sensitive (ES) Devices

Some semiconductor (solid state) devices can be damaged easily by static electricity. Such components commonly are called Electrostatically Sensitive (ES) Devices. Examples of typical ES devices are integrated circuits and some field-effect transistors and semiconductor "chip" components. The following techniques should be used to help reduce the incidence of component damage caused by electrostatic discharge (ESD).

1. Immediately before handling any semiconductor component or semiconductor-equipped assembly, drain off any ESD on your body by touching a known earth ground. Alternatively, obtain and wear a commercially available discharging ESD wrist strap, which should be removed for potential shock reasons prior to applying power to the unit under test.
2. After removing an electrical assembly equipped with ES devices, place the assembly on a conductive surface such as aluminum foil, to prevent electrostatic charge buildup or exposure of the assembly.
3. Use only a grounded-tip soldering iron to solder or unsolder ES devices.
4. Use only an anti-static solder removal device. Some solder removal devices not classified as "anti-static (ESD protected)" can generate electrical charge sufficient to damage ES devices.
5. Do not use freon-propelled chemicals. These can generate electrical charges sufficient to damage ES devices.
6. Do not remove a replacement ES device from its protective package until immediately before you are ready to install it. (Most replacement ES devices are packaged with leads electrically shorted together by conductive foam, aluminum foil or comparable conductive material).
7. Immediately before removing the protective material from the leads of a replacement ES device, touch the protective material to the chassis or circuit assembly into which the device will be installed.

   Caution:

   Be sure no power is applied to the chassis or circuit, and observe all other safety precautions.
8. Minimize bodily motions when handling unpackaged replacement ES devices. (Otherwise harmless motion such as the brushing together of your clothes fabric or the lifting of your foot from a carpeted floor can generate static electricity (ESD) sufficient to damage an ES device).

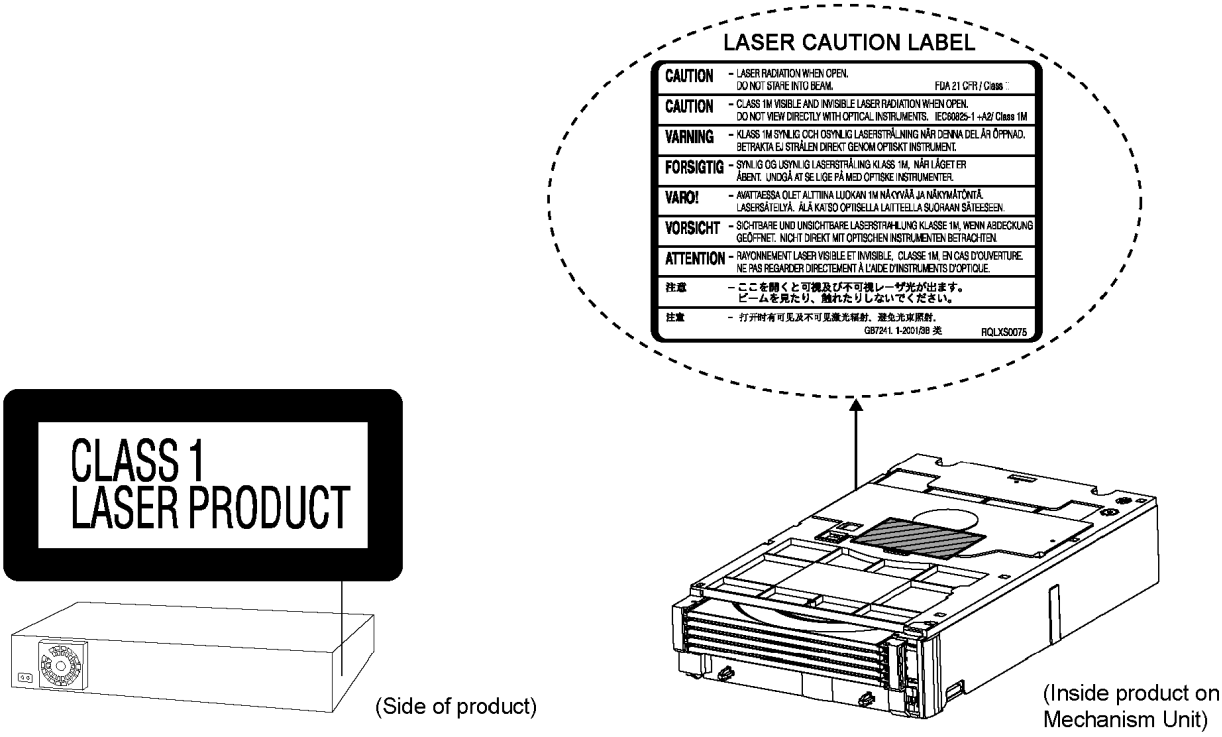
3 Precaution of Laser Diode

CAUTION :

This product utilizes a laser diode with the unit turned "on", invisible laser radiation is emitted from the pickup lens.
Wavelength: 655 nm (DVD)/785 nm (CD)
Maximum output radiation power from pickup: 100 µW/VDE

Laser radiation from the pickup unit is safety level, but be sure the followings:

1. Do not disassemble the pickup unit, since radiation from exposed laser diode is dangerous.
2. Do not adjust the variable resistor on the pickup unit. It was already adjusted.
3. Do not look at the focus lens using optical instruments.
4. Recommend not to look at pickup lens for a long time.


LASER CAUTION LABEL
CAUTION – LASER RADIATION WHEN OPEN. DO NOT STARE INTO BEAM. FDA 21 CFR / Class
CAUTION – CLASS 1M VISIBLE AND INVISIBLE LASER RADIATION WHEN OPEN. DO NOT VIEW DIRECTLY WITH OPTICAL INSTRUMENTS. IEC60825-1 +A2/ Class 1M
VARNING – KLASS 1M SYNLIG OCH OSYNLIG LASERSTRÅLNING NÄR DENNA DEL ÄR ÖPPNAD. BETRAKTA EJ STRÅLEN DIREKT GENOM OPTISKT INSTRUMENT.
FORSIGTIG – SYNLIG OG USYNLIG LASERSTRÅLING KLASS 1M, NÅR LÅGET ER ÅBENT. UNDGÅ AT SE LIGE PÅ MED OPTISKE INSTRUMENTER.
VARO! – AVATTAESSA OLET ALTTIINA LUOKAN 1M NÄKYVÄÄ JA NÄKYMÄTÖNTÄ. LASERSÄTEILYÄ. ÄLÄ KATSO OPTISELLA LAITTEELLA SUORAAN SÄTEESEEN.
VORSICHT – SICHTBARE UND UNSICHTBARE LASERSTRAHLUNG KLASSE 1M, WENN ABDECKUNG GEÖFFNET. NICHT DIREKT MIT OPTISCHEN INSTRUMENTEN BETRACHTEN.
ATTENTION – RAYONNEMENT LASER VISIBLE ET INVISIBLE, CLASSE 1M, EN CAS D'OUVERTURE. NE PAS REGARDER DIRECTEMENT À L'AIDE D'INSTRUMENTS D'OPTIQUE.
注意 – ここを開くと可視及び不可視レーザ光が出ます。ビームを見たり、触れたりしないでください。
注意 – 打开时有可见及不可见激光辐射，避免光束照射。
GB7247.1-2001/IEC 825 RQLXS0075
CLASS 1
LASER PRODUCT
(Side of product)
(Inside product on Mechanism Unit)

CAUTION:
THIS PRODUCT UTILIZES A LASER.
USE OF CONTROLS OR ADJUSTMENTS OR PERFORMANCE OF PROCEDURES OTHER THAN THOSE SPECIFIED HEREIN MAY RESULT IN HAZARDOUS RADIATION EXPOSURE.

4 About Lead Free Solder (PbF)

4.1. Service caution based on legal restrictions

4.1.1. General description about Lead Free Solder (PbF)

The lead free solder has been used in the mounting process of all electrical components on the printed circuit boards used for this equipment in considering the globally environmental conservation.

The normal solder is the alloy of tin (Sn) and lead (Pb). On the other hand, the lead free solder is the alloy mainly consists of tin (Sn), silver (Ag) and Copper (Cu), and the melting point of the lead free solder is higher approx.30 degrees C (86°F) more than that of the normal solder.

Definition of PCB Lead Free Solder being used

The letter of “PbF” is printed either foil side or components side on the PCB using the lead free solder. (See right figure)	PbF

Service caution for repair work using Lead Free Solder (PbF)

- The lead free solder has to be used when repairing the equipment for which the lead free solder is used.
  (Definition: The letter of “PbF” is printed on the PCB using the lead free solder.)
- To put lead free solder, it should be well molten and mixed with the original lead free solder.
- Remove the remaining lead free solder on the PCB cleanly for soldering of the new IC.
- Since the melting point of the lead free solder is higher than that of the normal lead solder, it takes the longer time to melt the lead free solder.
- Use the soldering iron (more than 70W) equipped with the temperature control after setting the temperature at 350±30 degrees C (662±86°F).

Recommended Lead Free Solder (Service Parts Route.)

- The following 3 types of lead free solder are available through the service parts route.
  RFKZ03D01K----------(0.3mm 100g Reel)
  RFKZ06D01K----------(0.6mm 100g Reel)
  RFKZ10D01K----------(1.0mm 100g Reel)

Note

* Ingredient: tin (Sn), 96.5%, silver (Ag) 3.0%, Copper (Cu) 0.5%, Cobalt (Co) / Germanium (Ge) 0.1 to 0.3%

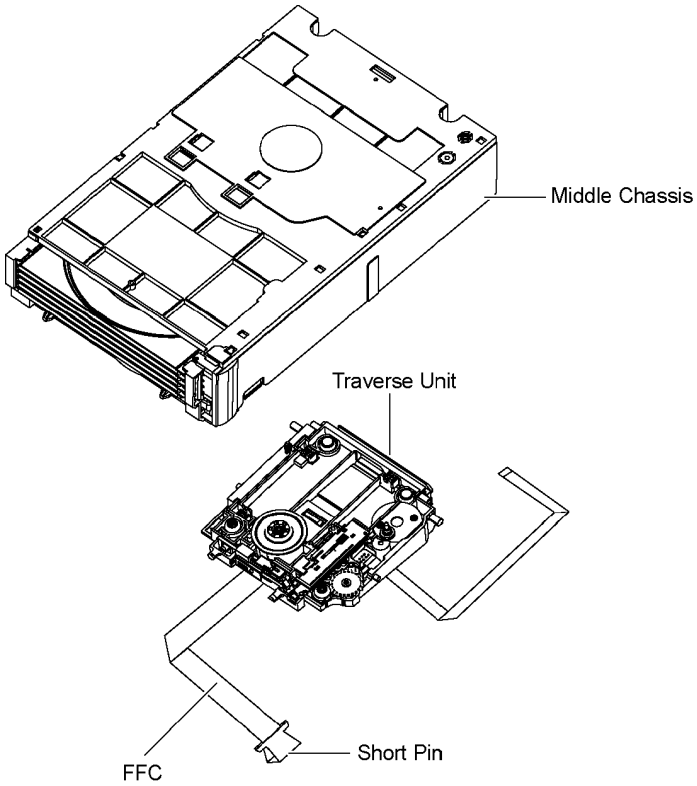
5 Handling Precautions for Traverse Unit

The laser diode in the optical pickup unit may break down due to static electricity of clothes or human body. Special care must be taken avoid caution to electrostatic breakdown when servicing and handling the laser diode in the traverse unit.

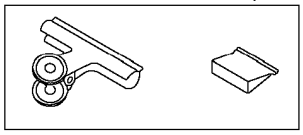
5.1. Cautions to Be Taken in Handling the Optical Pickup Unit

The laser diode in the optical pickup unit may be damaged due to electrostatic discharge generating from clothes or human body. Special care must be taken avoid caution to electrostatic discharge damage when servicing the laser diode.

1. Do not give a considerable shock to the optical pickup unit as it has an extremely high-precise structure.
2. To prevent the laser diode from the electrostatic discharge damage, the flexible cable of the optical pickup unit removed should be short-circuited with a short pin or a clip.
3. The flexible cable may be cut off if an excessive force is applied to it. Use caution when handling the flexible cable.
4. The antistatic FPC is connected to the new optical pickup unit. After replacing the optical pickup unit and connecting the flexible cable, cut off the antistatic FPC.



[Caution]
Ground the cable with a clip or a short pin.



Clip or Short Pin

5.2. Grounding for electrostatic breakdown prevention

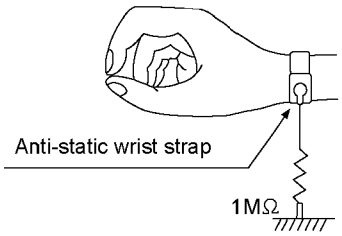
Some devices such as the DVD player use the optical pickup (laser diode) and the optical pickup will be damaged by static electricity in the working environment. Proceed servicing works under the working environment where grounding works is completed.

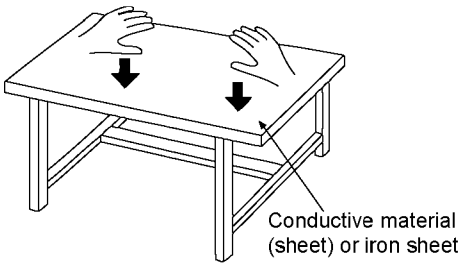
5.2.1. Worktable grounding

1. Put a conductive material (sheet) or iron sheet on the area where the optical pickup is placed, and ground the sheet.

5.2.2. Human body grounding

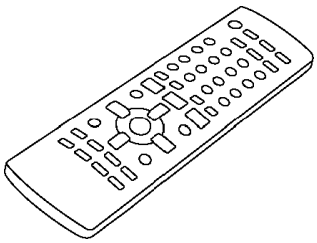
1. Use the anti-static wrist strap to discharge the static electricity form your body.


Anti-static wrist strap
1MΩ

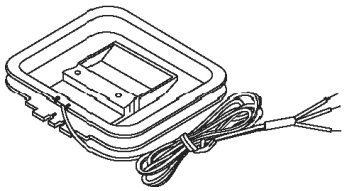

Conductive material
(sheet) or iron sheet

6 Accessories

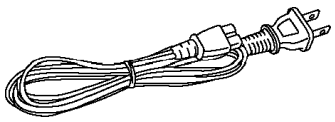
- **Note: Refer to “Replacement Parts List” (Section 25) for the part number.**



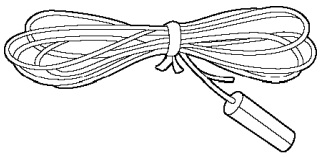
Remote control



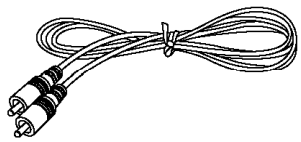
AM loop antenna



AC power supply cord



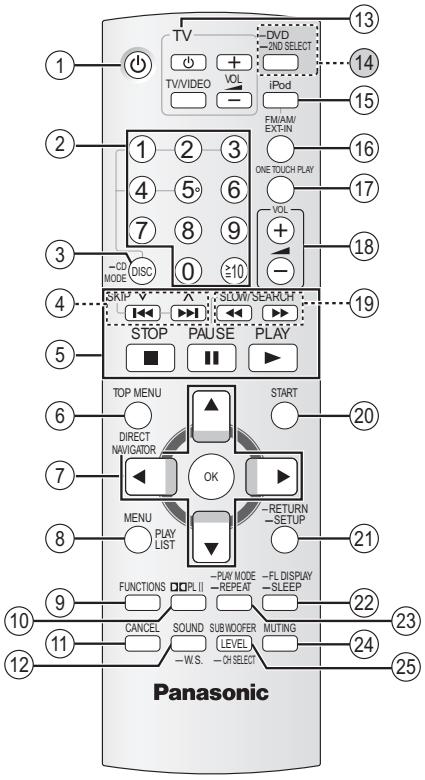
FM indoor antenna



Video cable

7 Operation Procedures

7.1. Remote Control Key Buttons Operations



(14) **[-DVD]** Select disc as the source : DVD/CD

This function is available only when using the optional Panasonic wireless sound system SH-FX85.

[2ND S ELECT]: Press and hold the button to change the source for the second room;
MAIN SOURCE (follows the selected source for the main room)→ (FM→AM)* → IPOD → Return to MAIN SOURCE

*If the main room is in FM/AM mode, you can only select the same mode for the FM/AM tuner of the second room.

For details, refer to the operating instructions for the optional Panasonic wireless sound system SH-FX85.

(1) Turn the main unit on/off

(2) Select channels and title numbers etc. / Enter numbers

(3) Select a disc / Play all loaded CDs sequentially

(4) Select preset radio stations

(5) Basic operations for play

(6) Show a disc top menu or program list

(7) Select or confirm menu items / Frame-by-frame

(8) Show a disc menu or play list

(9) Show on screen menu

(10) Turn Dolby Pro Logic II on/off

(11) Cancel

(12) Turn Whisper-mode Surround on/off

(13) TV operations
Aim the remote control at the Panasonic TV and press the button.
[⏻ TV]: Turn the TV on/off
[TV/VIDEO]: Change the TV's video input mode
[+ , -]: Adjust the TV volume
This may not work properly with some models.

(15) Select iPod as the source

(16) Select FM/AM tuner or external audio as the source
DVD/CD→FM→AM→AUX→D-IN

(17) Start up and play a disc automatically

(18) Adjust the volume of the main unit

(19) Select radio stations manually

(20) Show START menu

(21) Return to previous screen / Show setup menu

(22) Switch information on the main unit's display
or
Set the Sleep timer
Press and hold [—SLEEP].
While the time is shown on the main unit's display, press the [—SLEEP] repeatedly.
SLEEP 30→SLEEP 60→SLEEP 90→SLEEP120
↑——OFF (Cancel)←——┘
- To confirm the remaining time, press and hold the button again.

Select the play mode / Set the repeat mode
Mute the sound
- "MUTING" flashes on the main unit's display while the function is on.
- To cancel, press the button again or adjust the volume.
- Muting is canceled when you switch the unit to standby.

Adjust the subwoofer level or select speaker channel

(23) Select the play mode / Set the repeat mode

(24) Mute the sound
- MUTING flashes on the main unit's display while the function is on.
- To cancel, press the button again or adjust the volume.
- Muting is canceled when you switch the unit to standby.

(25) Adjust the subwoofer level or select speaker channel

Avoiding interference with other Panasonic equipment

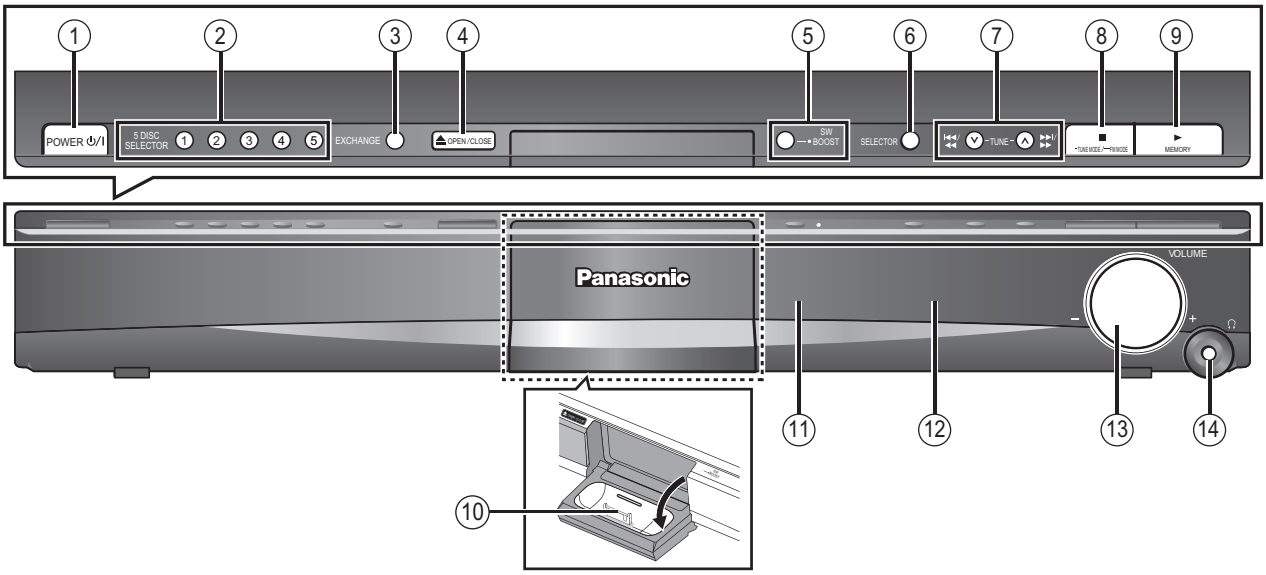
Other Panasonic audio/video equipment may start functioning when you operate the unit using the supplied remote control. You can operate this unit in another mode by setting the remote control operating mode to "REMOTE 2".

The main unit and remote control must be set to the same mode.

1 Press and hold [▶▶|/▶▶|] on the main unit and [2] on the remote control until the main unit's display shows "REMOTE 2".
2 Press and hold [OK] and [2] on the remote control for at least 2 seconds.

To change the mode back to "REMOTE 1", repeat both steps above by replacing [2] with [1].

7.2. Main Unit Key Buttons Operations



(1) Stand by/on switch [POWER ⏻ / I]
Press to switch the unit from on to standby mode or vice versa. In standby mode, the unit is still consuming a small amount of power.

(2) 5 DISC SELECTOR
Select a disc directly

(3) Disc exchange
Open the disc tray to exchange the disc.

(4) Open/Close the disc tray

(5) Turn Subwoofer Boost on/off

(6) Select the source
DVD/CD → FM → AM → AUX → D-IN → IPOD

(7) Skip or slow-search play / Select the radio stations

(8) Stop playing / Select the tuning mode / Adjust the FM reception condition

(9) Play discs / Memorize the receiving radio stations

(10) Connect iPod

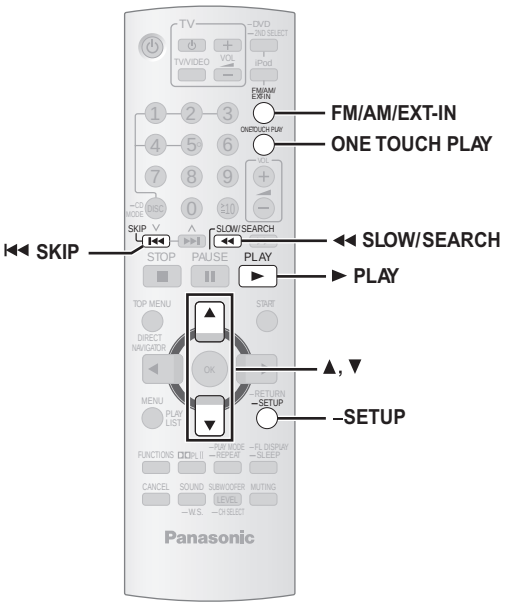
(11) Remote control signal sensor

(12) Display

(13) Adjust the volume of the main unit

(14) **Connect headphones (not included)**
Headphone plug type: ∅3.5 mm (1/8z) stereo mini plug
- Reduce the volume before connecting.
- Audio is automatically switched to 2-channel stereo.
- To prevent hearing damage, avoid listening for prolonged periods of time.

7.3. Using the VIERA Link “HDAVI Control™”



VIERA Link HD AVI Control

VIERA Link™ is a new name for EZ Sync™.

VIERA Link HDAVI Control is a convenient function that offers linked operations of this unit, and a Panasonic TV (VIERA) under HDAVI Control . You can use this function by connecting the equipment with the HDMI cable. See the operating instructions for connected equipment for operational details.

- VIERA Link HDAVI Control , based on the control functions provided by HDMI which is an industry standard known as HDMI CEC (Consumer Electronics Control), is a unique function that we have developed and added. As such, its operation with other manufacturers equipment that supports HDMI CEC cannot be guaranteed.
- This unit supports HDAVI Control 3 function.
  HDAVI Control 3 is the newest standard (current as of December, 2007) for Panasonic s HDAVI Control compatible equipment. This standard is compatible with Panasonic s conventional HDAVI equipment.
- Please refer to individual manuals for other manufacturers equipment supporting VIERA Link function.

The TV with HDAVI Control 2 (or later) function enables the following operation: VIERA Link Control only with TV s remote control [for HDAVI Control 2 (or later)]

Preparation

- Confirm that the HDMI connection has been made
- Set VIERA Link to ON
- To complete and activate the connection correctly, turn on all VIERA Link HDAVI Control compatible equipment and set the TV to the corresponding HDMI input mode for this unit.

Setting the TV audio for VIERA Link HD AVI Control

Select between AUX and D-IN to work with the linked operations. Confirm the audio connection to the AUX terminal (for AUX) or OPTICAL IN terminal (for D-IN)

1 Press [> , < SELECT] to select AUX or D-IN .
2 Press [SETUP] to select TV AUDIO , then press [▲,▼] to switch AUX or D-IN .

Whenever the connection or settings are changed, reconfirm the points above.

* “AUX” or “D-IN” (“DIGITAL IN”) works depending on the “TV AUDIO” setting (→above, Setting the TV audio for VIERA Link “HDAVI Control”).

Automatic setup

The settings for TV ASPECT * 1 and LANGUAGE * 2 will automatically follow to the settings of the TV.

(This may not work if the corresponding setting you have made for your TV is not available on this unit.)

* 1 When using VIERA Link HDAVI Control with HDAVI Control 3 compatible TV
* 2 When using VIERA Link HDAVI Control with HDAVI Control 2 (or later) compatible TV

One touch play

You can turn on this unit and the TV, and start playing the disc with a single press of a button.

To start disc playback.
- This unit s speakers will be automatically activated

This function also works if you press [▶ PLAY] on this unit s remote control when this unit is in standby mode.

Note

Playback may not be immediately displayed on the TV. If you miss the beginning portion of playback, press [|◀◀] or [◀◀] to go back to where playback started.

Auto input switching

- When you switch the TV input to TV tuner mode, this unit will automatically switch to AUX * or D-IN * . (This does not work when this unit is in IPOD mode.)
- When you start disc play, the TV will automatically switch its input mode for this unit.

Power off link

When the TV is turned off, this unit goes into standby mode automatically.

- This function works only when DVD/CD , AUX * or D-IN * is selected as the source on this unit.
- When the TV is turned on, this unit does not turn on automatically. (Power on link is not available.)

Note

When you press [⏻], only this unit turns off. Other connected equipment compatible with VIERA Link HDAVI Control stays on.

Speaker control

You can select whether audio is output from this unit s speakers or the TV speakers by using the TV menu settings. For details, refer to the operating instructions of your TV.

Home theater

This unit s speakers are active.

- When this unit is in standby mode, changing the TV speakers to this unit s speakers in the TV menu will automatically turn this unit on and select AUX ˚ or D-IN ˚ as the source.
- The TV speakers are automatically muted.
- You can control the volume setting using the volume or mute button on the TV s remote control. (The volume level is displayed on the main unit s FL display.)
- To cancel muting, you can also use this unit s remote control
- If you turn off this unit, TV speakers will be automatically activated.

TV

TV speakers are active.

- The volume of this unit is set to 0 .
  This function works only when DVD/CD , AUX ˚ or D-IN § is selected as the source on this unit.
- Audio output is 2-channel audio.

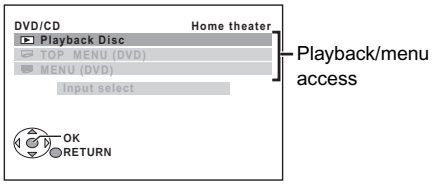
When switching between this unit speakers and TV speakers, the TV screen may be blank for several seconds.

VIERA Link Control only with TV s remote control [for HD AVI Control 2 (or later)]

You can control the playback menus of this unit with the TV s remote control. When operating the TV s remote control, refer to the below illustration for operation buttons.

1 Select this unit s operation menu by using the TV menu settings. (For details, refer to the operating instructions of your TV.)

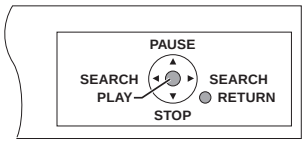
The START menu will be shown.
e.g. DVD-V



- The START menu can also be shown by using a button on the TV s remote control (e.g. [SUB MENU]).
  When DVD/CD is selected as the source, this works only during stop mode.
  This does not work while iPod music playback screen is displayed on the TV.

2 Select the desired item on the START menu

When the on-screen control panel appears
e.g. DVD-V (when Playback Disc is selected from the START menu.)



You can operate the playback with the indicated controls.

- The on-screen control panel can also be shown by using a button on the TV s remote control (e.g. [SUB MENU]).
  This works only during DVD/CD playback and resume modes or, while iPod music playback screen is displayed on the TV.

Note

- Depending on the menu, some button operations cannot be performed from the TV s remote control.
- You cannot input numbers with the numbered buttons on the TV s remote control ([0] to [9]). Use this unit s remote control to select the play list etc.

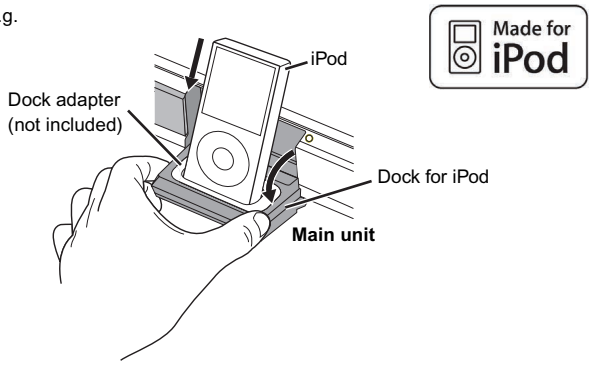
7.4. Using the iPod

Preparation

- To view photos/videos from the iPod
  - Ensure the video connection to the VIDEO CUT terminal on this unit
  - Operate the iPod menu to make the appropriate photo/ video output settings for your TV. (Refer to operating instructions of your iPod.)
- To display the picture, turn on the TV and select the appropriate video input mode.
- Before connecting/disconnecting the iPod, turn this unit off or reduce the volume of this unit to its minimum.

Connect the iPod (not included) firmly.
Recharging starts when the iPod is inserted.

e.g.

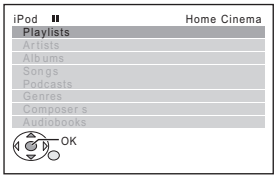


- Hold the dock when connecting/disconnecting the iPod.
- Attach the dock adapter which should be supplied with your iPod to the dock for the stable use of the iPod. If you need an adpter, consult your iPod dealer.

Select "IPOD".
The iPod automatically switches to this unit's display mode.

Music menu appears on the TV.

e.g.



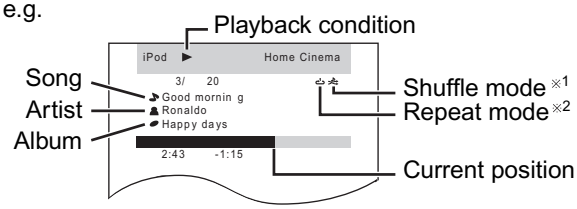
To operate through display of iPod, press [FUNCTIONS].

Enjoying music

Select an item.
- Press [◀, ▶] to skip page by page.
- To return to the previous screen, press [RETURN].

Play starts from the selected song.

e.g.



***1 To select shuffle modes**

Press [−PLAY MODE]
Each time you press the button:

: Song shuffle
: Album shuffle
Off: Cancel

***2 To select repeat modes**

Press and hold [−REPEAT] and then press the button repeatedly within 3 seconds.
Each time you press the button:

: Repeat 1 track
: Repeat all
Off: Cancel

Enjoying photos/videos

1

Switch the iPod to its own display mode.
Proceed operations through display of iPod.

2 **Play a slideshow or video on your iPod.**
The picture will be displayed on your TV.

You can also use the remote control to operate iPod menu.

[▲,▼]: To navigate menu items
[OK]: To go to the next menu
[RETURN]: To return to the previous menu

Basic controls (For music and videos only)

Button	Function
[▶ PLAY]	Play
[■ STOP], [❚❚ PAUSE]	Pause
[⏮, ⏭]	Skip
(press and hold) [⏮, ⏭]	Search

- You can enjoy surround sound effect when you press [DD PL II] to turn on Dolby Pro Logic II

When using the START menu in "IPOD" mode
Select "Music" or "Photos/Videos".
Music: Shows the music menu.
Photos/Videos: Switches to display of iPod.

About recharging the battery
- iPod will start recharging regardless of whether this unit is on or off.
- "IPOD ✳" will be shown on this unit's display during iPod charging in this unit standby mode.
- Check iPod to see if the battery is fully recharged.
- If you are not using iPod for an extended period of time after recharging has completed, disconnect it from this unit, as the battery will be depleted naturally. (Once fully recharged, additional recharging will not occur.)

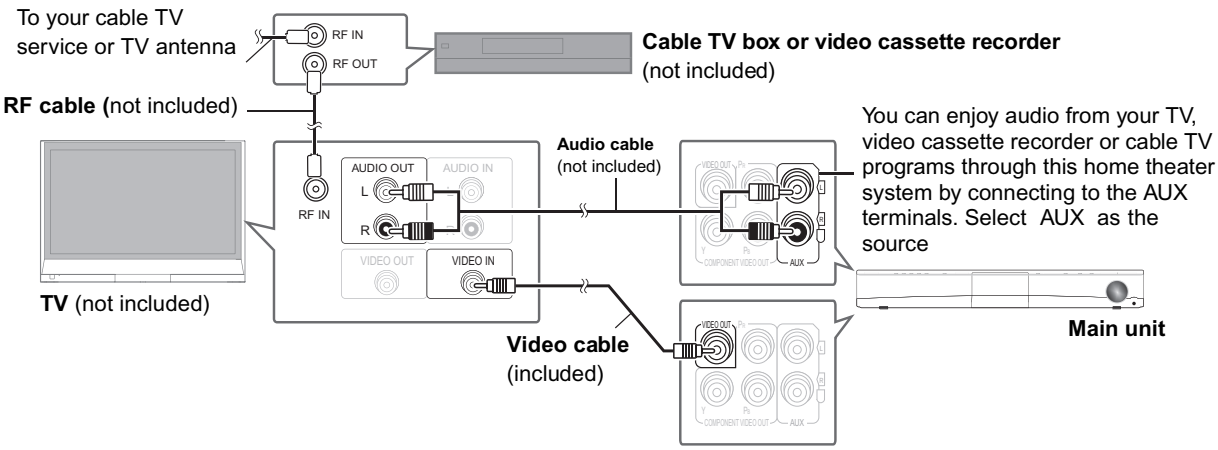
Compatible iPod
- iPod touch (8GB, 16GB)
- iPod nano 3rd generation (video) (4GB, 8GB)
- iPod classic (80GB, 160GB)
- iPod nano 2nd generation (aluminum) (2GB, 4GB, 8GB)
- iPod 5th generation (video) (60GB, 80GB)
- iPod 5th generation (video) (30GB)
- iPod nano 1st generation (1GB, 2GB, 4GB)
- iPod 4th generation (color display) (40GB, 60GB)
- iPod 4th generation (color display) (20GB, 30GB)
- iPod 4th generation (40GB)
- iPod 4th generation (20GB)
- iPod mini (4GB, 6GB)

Compatibility depends on the software version of your iPod.

7.5. Audio and Video Connection

7.5.1. Basic Setup

Basic setup example


To your cable TV service or TV antenna
RF IN
RF OUT
Cable TV box or video cassette recorder (not included)
RF cable (not included)
You can enjoy audio from your TV, video cassette recorder or cable TV programs through this home theater system by connecting to the AUX terminals. Select AUX as the source
Audio cable (not included)
AUDIO OUT
AUDIO IN
L
R
RF IN
VIDEO OUT
VIDEO IN
TV (not included)
Video cable (included)
Main unit
AUX

7.5.2. Connecting to a Television with HDMI & Component Video Out Terminal

TV terminal	Cable required (not included)	Main unit terminal	Features
HDMI AV IN	HDMI cable [Note] Non-HDMI-compliant cables cannot be utilized. It is recommended that you use Panasonic s HDMI cable. Recommended part number: RP-CDHG15 (1.5 m/4.9 ft), RP-CDHG30 (3.0 m/9.8 ft), RP-CDHG50 (5.0 m/16.4 ft), etc.	HDMI AV OUT HDMI	This connection provides the best picture quality. • Set VIDEO PRIORITY to ON • Set VIDEO FORMAT in Menu 4 (HDMI) VIERA Link HDAVI Control If your Panasonic TV is an HDMI control compatible, you can operate your TV synchronizing with home theater operations or vice versa • Make the audio connection when you use VIERA Link HDAVI Control function.
COMPONENT VIDEO IN Y PB PR All Panasonic televisions that have 480p input connectors are compatible. Consult the manufacturer if you have another brand of TV.	Video cables	COMPONENT VIDEO VIDEO OUT Y PB PR COMPONENT VIDEO OUT • Connect to terminals of the same color.	This connection provides a much purer picture than the VIDEO OUT terminal. • After making this connection, select DARKER from the BLACK LEVEL in the VIDEO menu. To enjoy progressive video • Connect to a progressive output compatible TV. Set VIDEO OUT (I/P) in VIDEO menu to PROGRESSIVE and then follow the instructions on the menu screen.

Note

- Do not make the video connections through the video cassette recorder. Due to copy guard protection, the picture may not be displayed properly.
- Only one video connection is required. Choose one of the video connections above depending on your TV.

7.5.3. Connecting to a Television with Optical Terminal

TV or external equipment terminal	Cable required (not included)	This unit terminal	Features
 OPTICAL OUT	**Optical digital audio cable** ● Do not bend sharply when connecting.	**OPTICAL IN** OPTICAL IN	This unit can decode the surround signals received through cable TV Box digital broadcasting or satellite broadcasts. Refer to your equipment's operating instructions for details. Only Dolby Digital and PCM can be played with this connection. ● After making this connection, make settings to suit the type of audio from your digital equipment

7.6. Disc Information

7.6.1. Disc Playability (Media)

Commercial discs

Disc	Logo	Indicated in these instructions by	Remarks
DVD-Video		DVD-V	High quality movie and music discs
Video CD		VCD	Music discs with video Including SVCD (Conforming to IEC62107)
CD		CD	Music discs

Recorded discs (○: Playable, —: Not playable)

Disc	Logo	Recorded on a DVD video recorder, etc.		Recorded on a personal computer, etc.			Finalizing※6
		DVD-VR※2	DVD-V※4	WMA	MP3	JPEG	
DVD-RAM		○	—	—	○	○	Not necessary
DVD-R/RW		○	○	—	○	○	Necessary
DVD-R DL		○※3	○	—	—	—	Necessary
+R/+RW	—	—	(○)※5	—	—	—	Necessary
+R DL	—	—	(○)※5	—	—	—	Necessary
CD-R/RW※1	—	—	—	○	○	○	Necessary※7

- It may not be possible to play all the above-mentioned discs in some cases due to the type of disc, the condition of the recording, the recording method, or how the files were created. [Refer to Section 7.7.2. File Extension Type Support WMA/MP3/JPEG)]

※1 This unit can play CD-R/RW recorded with CD-DA or Video CD format.
※2 Discs recorded on DVD recorders or DVD video cameras, etc. using Version 1.1 of the Video Recording Format (a unified video recording standard).
※3 Discs recorded on DVD recorders or DVD video cameras using Version 1.2 of the Video Recording Format (a unified video recording standard).
※4 Discs recorded on DVD recorders or DVD video cameras using DVD-Video Format.
※5 Recorded using a format different from DVD-Video Format, therefore some functions cannot be used.
※6 A process that allows play on compatible equipment. To play a disc that is indicated as "Necessary", the disc must first be finalized on the device it was recorded on.
※7 Closing the session will also work.

Note about using a DualDisc
The digital audio content side of a DualDisc does not meet the technical specifications of the Compact Disc Digital Audio (CD-DA) format so playback may not be possible.

■ Discs that cannot be played

Blu-ray, HD DVD, AVCHD discs, DVD-RW version 1.0, DVD-Audio, DVD-ROM, CD-ROM, CDV, CD-G, SACD, DivX Video Discs and Photo CD, DVD-RAM that cannot be removed from their cartridge, 2.6 GB and 5.2 GB DVD-RAM, and "Chaoji VCD" available on the market including CVD, DVCD and SVCD that do not conform to IEC62107.

■ *Disc handing precautions*

- Do not attach labels or stickers to discs. This may cause disc warping, rendering it unusable.
- Do not write on the label side with a ball-point pen or other writing instrument.
- Do not use record cleaning sprays, benzine, thinner, liquids which prevent static electricity, or any other solvent.
- Do not use scratch-proof protectors or covers.
- Do not use the following discs:
  - Discs with exposed adhesive from removed stickers or labels (rented discs, etc.).
  - Discs that are badly warped or cracked.
  - Irregularly shaped discs, such as heart shapes.

7.6.2. File Extension Type Support (WMA/MP3/JPEG)

Format	Disc	Extension	Reference
WMA	**CD-R/RW**	".WMA" ".wma"	● Compatible compression rate: between 48 kbps and 320 kbps ● You cannot play WMA files that are copy-protected. ● This unit does not support Multiple Bit Rate (MBR: an encoding process for audio content that produces an audio file encoded at several different bit rates).
MP3	**DVD-RAM** **DVD-R/RW** **CD-R/RW**	".MP3" ".mp3"	● This unit does not support ID3 tags. ● Sampling frequency and compression rate: – DVD-RAM, DVD-R/RW: 11.02, 12, 22.05, 24 kHz (8 to 160 kbps), 44.1 and 48 kHz (32 to 320 kbps) – CD-R/RW: 8, 11.02, 12, 16, 22.05, 24 kHz (8 to 160 kbps), 32, 44.1 and 48 kHz (32 to 320 kbps)
JPEG	**DVD-RAM** **DVD-R/RW** **CD-R/RW**	".JPG" ".jpg" ".JPEG" ".jpeg"	● JPEG files taken on a digital camera that conform to DCF Standard (Design rule for Camera File system) Version 1.0 are displayed. – Files that have been altered, edited or saved with computer picture editing software may not be displayed. ● This unit cannot display moving pictures, MOTION JPEG and other such formats, still pictures other than JPEG (e.g. TIFF), or play pictures with attached audio.

- There may be differences in the display order on the menu screen and computer screen.
- This unit cannot play files recorded using packet write.

DVD-RAM
- Discs must conform to UDF 2.0.

DVD-R/RW
- Discs must conform to UDF bridge (UDF 1.02/ISO9660).
- This unit does not support multi-session. Only the default session is played.

CD-R/RW
- Discs must conform to ISO9660 level 1 or 2 (except for extended formats).
- This unit supports multi-session but if there are many sessions it takes more time for play to start. Keep the nhdYmb of sessions to a minimum to avoid this.

8 Self-Diagnosis and Special Mode Setting

8.1. Service Mode Summary Table

8.1.1. Service Mode Table (For DVD)

The service modes can be activated by pressing various button combination on the main unit and remote control unit.

Below is the summary for the various modes for checking:

Main unit buttons	Remote control unit buttons	Application	Note
[STOP]	[0]	Error code check.	(Refer to the section "8.2.1. Service Mode Table 1" for more information.)
	[5]	Jitter checking.	
	[PAUSE]	Initial setting of laser drive current.	
	[FUNCTIONS]	DVD laser drive current check.	(Refer to the section "8.2.2. Service Mode Table 2" for more information.)
	[3]	CD laser drive current check.	
	[6]	Region display and mode.	
	[SOUND]	CPPM/CRM keys check.	
	[7]	Micro-processor firmware version check.	(Refer to the section "8.2.3. Service Mode Table 3" for more information.)
	[≧10]	Initialization of the player (factory setting is restored). Used after replacement of Micro-processor (DV5 LSI) IC, FLASH ROM IC (IC8651), EEPROM IC (IC8611) and DVD Module P.C.B.	
	[OK]	DVD Module P.C.B. reset.	
	[8]	DVD Module P.C.B. firmware version check.	(Refer to the section "8.2.4. Service Mode Table 4" for more information.)
	[▲]	Timer 1 check.	
	[▼]	Timer 1 reset.	
	[▶]	Timer 2 check.	
	[◀]	Timer 2 reset.	

Note:

An error code will be canceled if a power supply is turned OFF.

*1: CPPM is the copy guard function beforehand written in the disk for protection of copyrights.

*2: CEC is the consumer electronic control used for high-level user control of HDMI-connected devices.

*3: HDCP is the specification developed to control digital audio & video contents transmission for DVI or HDMI connections.

8.1.2. Service Mode Summary Table (For CR14)

Main buttons	Remote control unit buttons	Application	Note
[STOP] + [⋀ /FF/ ▶▶|]	-	Entering into self-diagnostic mode.	(Refer to the section "8.3.1. Service Mode Table 1" for more information.)
[1] (In self-diagnostic mode)	-	Servicing the mechanism unit.	
[2] (In self-diagnostic mode)	-	Servicing the traverse unit.	
In Self Diagnostic Mode	[1]	Reliability 1 (Load)	(Refer to the section "8.3.2. Service Mode Table 2" for more information.)
	[2]	Reliability 2 (Cycle)	
	[3]	Reliability 3 (Combi)	

8.2. Service Mode Table (For DVD)

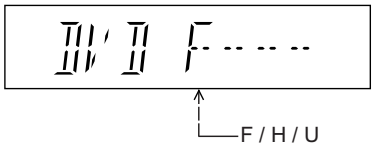
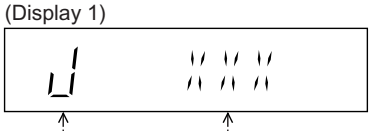
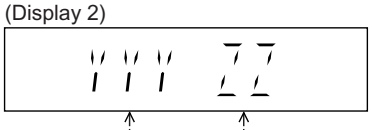
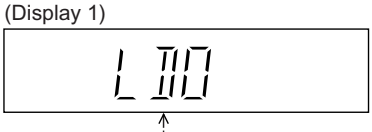
By pressing various button combinations on the main unit and remote control unit, you can activate the various service modes for checking.

Special Note:

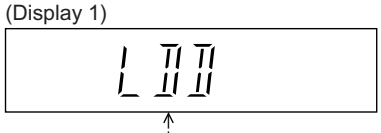
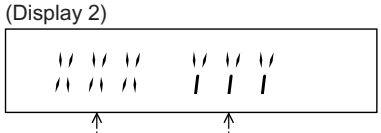
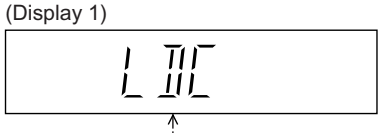
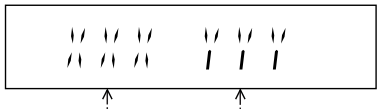
- Due to the limitations of the no. characters that can be shown on the FL Display, the "FL Display" button on the remote control unit can be used to show the two display pages. (Display 1 / Display 2).

● Refer to Section 7.1 for the section on “Remote Control Key Buttons Operations”.

8.2.1. Service Mode Table 1

Item		FL Display	Key Operation
Mode Name	Description		Front Key
Error code check	Error code check The latest error code stored in the EEPROM IC is displayed. Note: Refer to "Section 8.3 DVD Self Diagnostic Function-Error Code" for more detailed information on the error codes.	 F / H / U Error code (play_err) is expressed in the following convention. Error code = 0 x DAXX is expressed: → DVDnn U12 Error code = 0 x DBXX is expressed: → DVDnn H12 Error code = 0 x DXXX is expressed: → DVDnn F123 Error code = 0 x 0000 is expressed: → DVDnn F--- * "xx" denotes the error code	In STOP (no disc) mode, press [STOP] button on the main unit, and [0] button on the remote control unit. *With pointing of cursor up and down on display. Cancelled automatically 5 seconds later. To exit, press [POWER] button on main unit or remote control.
Jitter check	Jitter check. Jitter rate is measured and displayed. Measurement is repeatedly done in the cycle of one second. Read error counter starts from zero upon mode setting. When target block data failed to be read out, the counter advances by one increment. When the failure is caused by minor error, it may be corrected when retried to enable successful reading. In this case, the counter advances by one. When the error persists even after retry, the counter may jump by two or more. FL Display sequence: Display 1→2.	(Display 1)  Jitter check mode Jitter rate Jitter rate is shown in decimal notation to one place of decimal. Focus drive value is shown in hexadecimal notation. (Display 2)  Lead Error Counter Focus Drive Value	In STOP (with disc inside tray) mode, press [STOP] button on the main unit, and [5] button on the remote control unit, after Display 1 appears, then press [PLAY]. Press [POWER] or [STOP] button to exit. Press [FL Display] on remote control unit for next page (FL Display).
Initial setting of laser drive current	Initial setting of laser drive current. Initial current value for the DVD laser and CD laser is separately saved in the EEPROM IC. FL Display sequence: Display 1→2.	(Display 1)  Laser current measurement mode The value denotes the current in decimal notation. (Display 2) CD Laser DVD Laser The above example shows the initial current is XXXmA and YYYmA for CD laser and DVD laser respectively when the laser is switched on.	In STOP (no disc) mode, press [STOP] button on the main unit, and [PAUSE] button on the remote control unit. Cancelled automatically 5 seconds later. Press [FL Display] on remote control unit for next page (FL Display) on values of laser drive current.

8.2.2. Service Mode Table 2

Item		FL Display	Key Operation
Mode Name	Description		Front Key
DVD laser drive current measurement	DVD laser drive current measurement. DVD laser drive current is measured and the result is displayed together with the initial value stored in the EEPROM IC. After the measurement, DVD laser emission is kept on. It is turned off when POWER key is switched off. FL Display sequence: Display 1→2.	(Display 1)  DVD laser current measurement mode The value denotes the current in decimal notation. (Display 2)  DVD Laser Initial Value DVD Laser Value The above example shows the initial current is XXXmA and the measured value is YYYmA.	In STOP (no disc) mode, press [STOP] button on the main unit, and [FUNCTIONS] button on the remote control unit. Cancelled automatically 5 seconds later. Press [FL Display] on remote control unit for next page (FL Display) on values of dvd drive current.
CD laser drive current measurement	CD laser drive current measurement. CD laser drive current is measured and the result is displayed together with the initial value stored in the EEPROM IC. After the measurement, CD laser emission is kept on. It is turned off when POWER key is switched off. FL Display sequence: Display 1→2.	(Display 1)  CD laser current measurement mode The value denotes the current in decimal notation. (Display 2)  CD laser initial value CD laser value The above example shows the initial current is XXXmA and the measured value is YYYmA.	In STOP (no disc) mode, press [STOP] button on the main unit, and [3] button on the remote control unit. Cancelled automatically 5 seconds later. Press [FL Display] on remote control unit for next page. (FL Display)
Region display	Region code display, TV broadcasting system & the model no. information. Note: Refer to Figure 8.1 for "Video Design Information".	 Model No. Information N: NTSC / 6: PAL60 N: no PAL / P: PAL Region No.: 0-8	In STOP (no disc) mode, press [STOP] button on the main unit, and [6] button on the remote control unit. Cancelled automatically 5 seconds later.
CPPM/CRM Keys Check	CPPM/CRM refers to the Content Protection for Recordable Media and Pre-Recorded Media. It displays the existence of the keys as "1" or "0". OK: Existing of keys. NG: Non existing of keys.	 0: NG 1: OK 0: NG 1: OK	In STOP (no disc) mode, press [STOP] button on the main unit, and [SOUND] button on the remote control unit. Cancelled automatically 5 seconds later.

Model Series	Country Region	Region Code	TV Broadcasting System	Product			
				Signal System (Default)	Region Display (Default)	OSD Default	OSD Menu Language
P, PC, PX	USA, Canada, PX	1	NTSC	NTSC (*A)	1PN	English	English, Spanish, Canadian, French
(S)	Japan	2	NTSC	NTSC (*A)	2PN	Japanese	Japanese, English
E	Europe	2	PAL	PAL (*C)	2P6	English	English, French, German, Spanish, Polish, Russian, Czech, Hungarian
EB, EG	Europe	2	PAL	PAL (*C)	2P6	English	English, French, German, Italian, Spanish, Polish, Swedish, Dutch
GC, GS	Middle East	2	PAL	PAL (*C)	2P6	English	English, French, German, Spanish, Polish, Russian, Czech, Hungarian
GCS, GD, GT, GCT	South East Asia, Korea, Taiwan	3	PAL NTSC	NTSC (*B)	3PN	English	English, Traditional Chinese
GN	New Zealand, Australia	4	PAL	PAL (*C)	4P6	English	English, French, German, Italian, Spanish, Polish, Swedish, Dutch
PL, GCP, LB	Central/South/ Latin America	4	NTSC	NTSC (*D)	4PN	English	English, Spanish, French, Brazilian Portuguese
EE	CIS	5	SECAM	PAL (*C)	5P6	English	English, French, German, Spanish, Polish, Russian, Czech, Hungarian
GK	China	6	PAL	NTSC (*B)	6PN	English	English, Simplified Chinese

NTSC (*A)

Source	Output
Screen Saver	NTSC
NTSC disc	NTSC
PAL disc	PAL (DVD-V)
	NTSC (DVD-A/VCD)

NTSC (*B)

Source	Output
Screen Saver	NTSC
NTSC disc	NTSC (default)
	PAL60
PAL disc	PAL

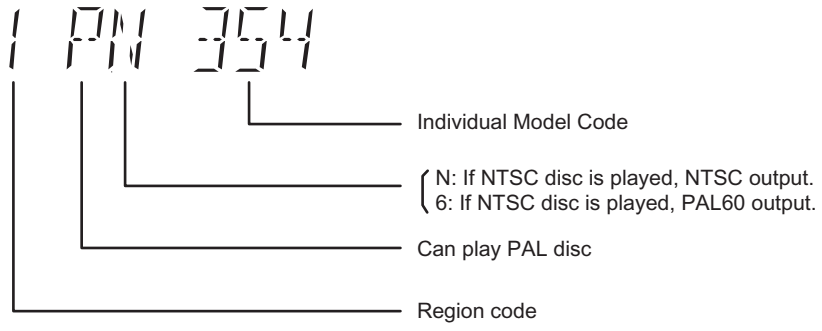
PAL (*C)

Source	Output
Screen Saver	PAL
NTSC disc	PAL60 (default)
	NTSC
PAL disc	PAL

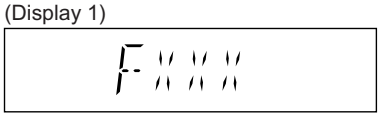
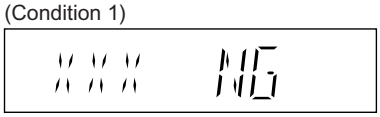
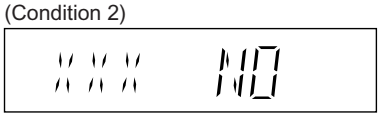
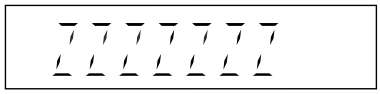
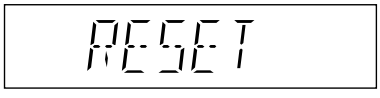
NTSC (*D)

Source	Output
Screen Saver	NTSC
NTSC disc	NTSC
PAL disc	NTSC

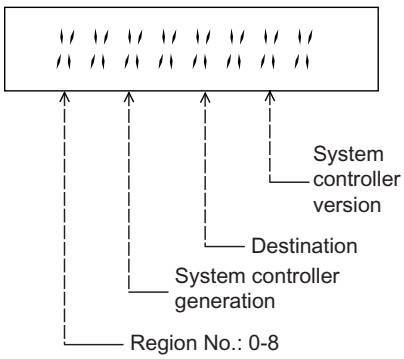
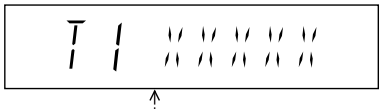
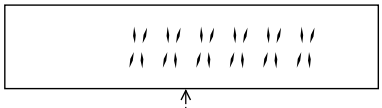
Explanation of Display


1 PN 3G4
Individual Model Code
N: If NTSC disc is played, NTSC output.
6: If NTSC disc is played, PAL60 output.
Can play PAL disc
Region code

8.2.3. Service Mode Table 3

Item		FL Display	Key Operation
Model Name	Description		Front Key
Micro-processor firmware version display & EEPROM checksum display.	Micro-processor firmware version display & EEPROM checksum display. EEPROM checksum is only available due to existence of EEPROM IC. Note: Condition 1/2/3 shows the state of EEPROM IC. FL Display sequence: Display 1→2→3.	(Display 1)  (Display 2) (Condition 1)  If the version of the EEPROM does not match, [NG] is displayed. (Condition 2)  (a) If there is NO EEPROM header string OR (b) If there is no EEPROM (no data is received by Micro-processor), [NO] is displayed. (Condition 3) If the EEPROM version matches, checksum [YYYY] is displayed. (Display 3) 	In STOP (no disc) mode, press [STOP] button on the main unit, and [7] button on the remote control unit. Cancelled automatically 5 seconds later. Press [FL Display] button on remote control unit for next page. (FL Display)
Initialization	Initialization. User settings are cancelled and player is initialized to factory setting. It is necessary when after replacement of Micro-processor (DV5 LSI) IC, FLASH ROM IC (IC8651), EEPROM IC (IC8611) & DVD Module P.C.B.		In STOP (no disc) mode, press [STOP] button on the main unit, and [≧10] button on the remote control unit. Cancelled automatically 5 seconds later.
DVD Module P.C.B. Reset	To reset DVD Module P.C.B. This process is used when the DVD Module P.C.B. or FLASH ROM IC is replaced with a new one.		While in initialization mode, press & hold [STOP] button on the main unit for 3 seconds, follow by [OK] button on the remote control unit. Cancelled automatically 5 seconds later.

8.2.4. Service Mode Table 4

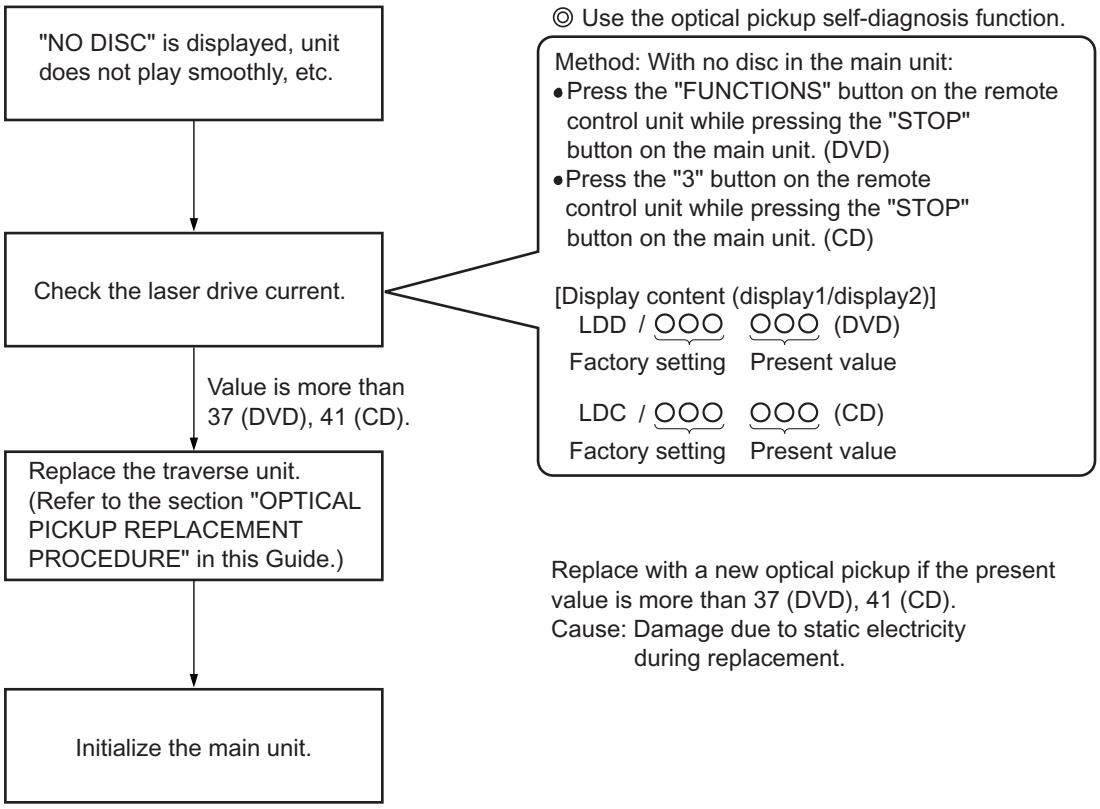
Item		FL Display	Key Operation
Mode Name	Description		Front Key
DVD Module P.C.B. firmware version display	DVD Module P.C.B. firmware version is displayed on the FL Display. The firmware version can be updated using recovery disc. Note: It is necessary to check for firmware version before carrying out the version up using the disc.		In STOP (no disc) mode, press [STOP] button on the main unit, and [8] button on the remote control unit. Cancelled automatically 5 seconds later.
Timer 1 check	Timer 1 check Laser operation timer is measured separately for DVD laser and CD laser. FL Display sequence: Display 1➞2.	(Display 1)  DVD laser usage time Shown to the above is DVD laser usage time, and to the below is CD laser usage time. Time is shown in 5 digits of decimal notation in a unit of 10 hours. "00000" will follow "99999". (DVD laser) (Display 2)  CD laser usage time Time is shown in 6 digits of decimal notation in a unit of 10 hours. "000000" will follow "999999". (CD laser)	In STOP (no disc) mode, press [STOP] button on the main unit, and [▲] button on the remote control unit. Cancelled automatically 5 seconds later. Press [FL Display] button for next page of FL Display.
Timer 1 reset	Timer 1 reset Laser operation timer of both DVD laser and CD laser is reset all at once.	 Time is shown in 5 digits of decimal notation in a unit of 10 hours. It will clear to "00000" upon reset.	While displaying Timer 1 data, press [STOP] button on the main unit, and [▼] button on the remote control unit. Cancelled automatically 5 seconds later
Timer 2 check	Timer 2 check Spindle motor operation timer	 Time is shown in 5 digits of decimal notation in a unit of 1 hour. "00000" will follow "99999".	In STOP (no disc) mode, press [STOP] button on the main unit, and [▶] button on the remote control unit. Cancelled automatically 5 seconds later.
Timer 2 reset	Timer 2 reset Spindle motor operation timer	 Time is shown in 5 digits of decimal notation in a unit of 1 hour. It will be cleared to "00000" upon activating this.	While displaying Timer 2 data, press [STOP] button on the main unit, and [◀] button on the remote control unit. Cancelled automatically 5 seconds later.

8.2.5. Optical Pick-up Self-Diagnosis

The optical pickup self-diagnosis function and tilt adjustment check function have been included in this unit. When repairing, use the following procedure for effective self-diagnosis and tilt adjustment. Be sure to use the self-diagnosis function before replacing the optical pickup when "NO DISC" is displayed. As a guideline, you should replace the optical pickup when the value of the laser drive current is more than the specified value.

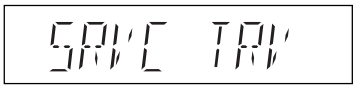
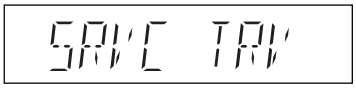
Note:

Press the power button to turn on the power, and check the value within three minutes before the unit warms up. (Otherwise, the result will be incorrect.)

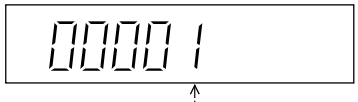
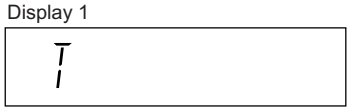
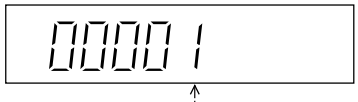
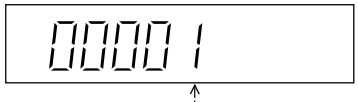

"NO DISC" is displayed, unit does not play smoothly, etc.
Check the laser drive current.
Value is more than 37 (DVD), 41 (CD).
Replace the traverse unit. (Refer to the section "OPTICAL PICKUP REPLACEMENT PROCEDURE" in this Guide.)
Initialize the main unit.
◎ Use the optical pickup self-diagnosis function.
Method: With no disc in the main unit:
• Press the "FUNCTIONS" button on the remote control unit while pressing the "STOP" button on the main unit. (DVD)
• Press the "3" button on the remote control unit while pressing the "STOP" button on the main unit. (CD)
[Display content (display1/display2)]
LDD / ○○○ ○○○ (DVD)
Factory setting Present value
LDC / ○○○ ○○○ (CD)
Factory setting Present value
Replace with a new optical pickup if the present value is more than 37 (DVD), 41 (CD).
Cause: Damage due to static electricity during replacement.

8.3. Service Mode Table (For CR14)

8.3.1. Service Mode Table 1

Item		FL Display	Key Operation
Mode Name	Description		Front Key
Self-Diagnostic Mode	To enter into self-diagnostic checking for CR14 mechanism.		In DVD/CD mode (ensure no disc is inserted): Press and hold [STOP] button for five seconds, followed by [∧/FF/►►I] button on the main unit. To exit, press [⏻/ⅡAC IN] button on main unit or remote control unit.
Service Mode 1	To unlock the mechanism unit for service. In this mode, the disassembly of CR14 can be carry out. (Refer to original service manual for CR14) 1. All trays are set to "STOCK" position. 2. Mechanism set to tray 1. 3. Cam gear set to "HOME" position.		In self-diagnostic mode, press [1] button on main unit. To exit, power off the main unit Press [EXCHANGE] on main unit for error code.
Service Mode 2	To unlock the traverse unit for service. In this mode, traverse unit can be disassembled. (Refer to original service manual for CR14) 1. Tray 5 set to "Play" position. 2. Mechanism set to tray 5. 3. Cam gear set to "HOME" position.		In self-diagnostic mode, press [2] button on main unit. To exit, power off the main unit Press [EXCHANGE] on main unit for error code. (Refer to section 8.6.1. for information)

8.3.2. Service Mode Table 2

Item		FL Display	Key Operation
Mode Name	Description		Front Key
Reliability 1 (Load cycle Test)	To determine open/close operation of the mechanism (all trays). In this mode, the trays are loaded & unloaded.	Display 1 Display 2  The counter will increment by one. When reach 99999 will change to 00000	In self-diagnostic mode, press [1] button on remote control. To exit, press [⏻/I] button on the main unit or remote control unit.
Reliability 2 (Traverse Cycle Test)	To determine playability operation.	Display 1  Display 2  The counter will increment by one. When reach 99999 will change to 00000	In self-diagnostic mode, press [2] button on remote control. To exit, press [⏻/I] button on the main unit or remote control unit.
Reliability 3 (Combi Cycle Test)	The combine test for both load & traverse cycle test.	Display 1 Display 2  The counter will increment by one. When reach 99999 will change to 00000	In self-diagnostic mode, press [3] button on remote control. To exit, press [⏻/I] button on the main unit or remote control unit.

8.4. Wireless Service Mode Summary Table

The service modes can be activated by pressing various button combination on the player and remote control unit.

Below is the summary of major checking:

Player buttons	Remote control unit buttons	Application	Note
FAST FORWARD	3	ID setting	(Refer to the section “8.5.1. Service Mode Table 1” for more information).
STOP	4	RF channel 1 display	(Refer to the section “8.5.2. Service Mode Table 2” for more information).
	5	RF channel 2 display	
	6	RF channel 3 display	
	7	Auto RF channel display	

Note: Main room refers to the location of the main unit.

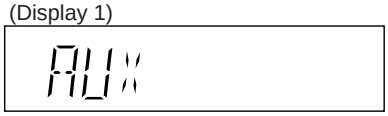
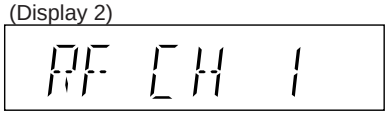
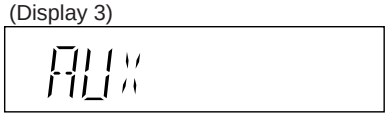
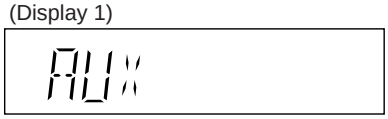
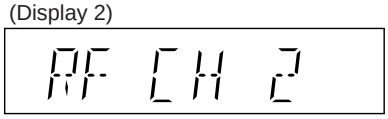
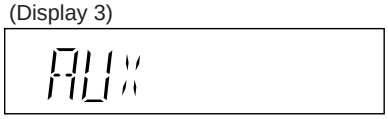
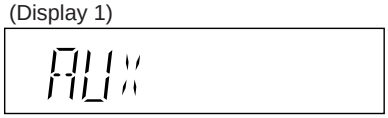
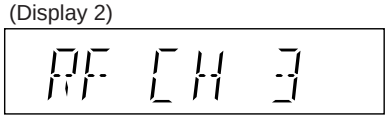
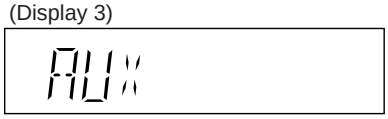
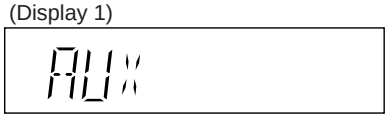
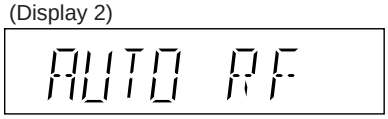
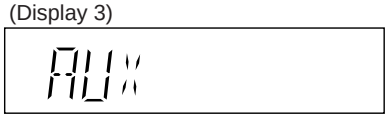
8.5. Service Mode Table (Wireless)

By pressing various button combinations on the player and remote control unit, you can activate the various service modes for checking.

8.5.1. Service Mode Table 1

Item		FL Display	Key Operation
Mode Name	Description		Front Key
ID Setting	To set the ID in the Tx & Rx. The system goes into "Pairing Mode". [P] will be displayed for 60 seconds to indicate it is in "Pairing Mode". During this condition, the "ID set" button on the receiver unit can be pressed to pair the Tx & Rx. After 60 seconds, the FL display will return to its previous display. Note: Carry out pairing when Tx or Rx has been changed. Note : W1 and/or W2 will blink during pairing. When pairing is successfully completed,upon next power-up W1 and/or W2 will not blink.		In CD/DVD mode. (with no disc inserted) Press and hold [FAST FORWARD] button on the main unit. Press the [⏻/I] on main unit or remote control to exit the pairing mode.
Active Transmitter Type Display	To check the type of transmitter inserted into the main unit. There are two types of transmitter card. (Type A & Type B). Type A: FX65 & Wireless Active Woofer Type B: FX85 (For multiroom features) When a transmitter card is inserted into main unit (PT660/760/960), FL displays the type of card: W1 → Type A W1 W2 → Type B Note: If transmitter card is not inserted properly or operation abnormally, W1 or W2 will blink. Pairing may be necessary.	(Display 1 - Transmitter is Type A) (Display 1 - Transmitter is Type B) 	

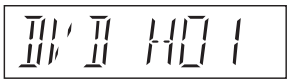
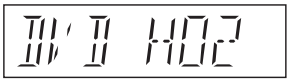
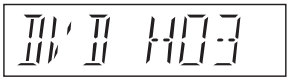
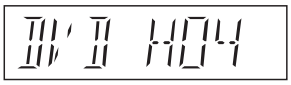
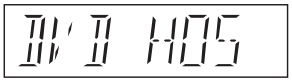
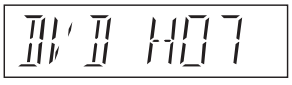
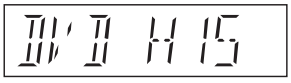
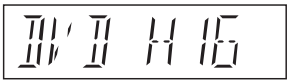
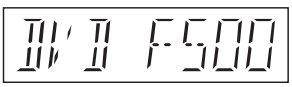
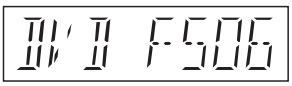
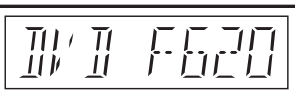
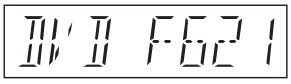
8.5.2. Service Mode Table 2

Item		FL Display	Key Operation
Mode Name	Description		Front Key
RF Channel Selection Display	RF Channel 1 Display* FL Display sequence: Display 1→2→3	(Display 1)  (Display 2)  (Display 3)  	Main room is in AUX mode. Press and hold [STOP] button on the main unit, and [4] button on the remote control unit. After 2 seconds.
	RF Channel 2 Display* FL Display sequence: Display 1→2→3	(Display 1)  (Display 2)  (Display 3)  	Main room is in AUX mode. Press and hold [STOP] button on the main unit, and [5] button on the remote control unit. After 2 seconds.
	RF Channel 3 Display* FL Display sequence: Display 1→2→3	(Display 1)  (Display 2)  (Display 3)  	Main room is in AUX mode. Press and hold [STOP] button on the main unit, and [6] button on the remote control unit. After 2 seconds.
	Auto RF Channel Display* FL Display sequence: Display 1→2→3	(Display 1)  (Display 2)  (Display 3)  	Main room is in AUX mode. Press and hold [STOP] button on the main unit, and [7] button on the remote control unit. After 2 seconds.

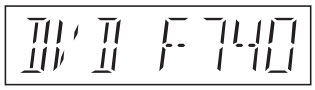
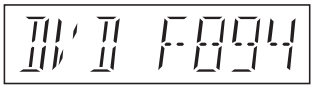
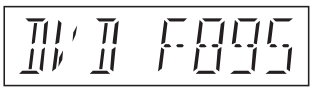
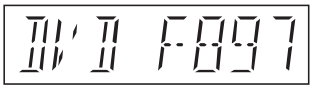
***Note: This mode is for purpose of disabling/enabling the frequency of automatic allocation and be able to select a fixed RF channel (channels 1, 2 or 3).**

8.6. DVD Self Diagnostic Function-Error Code

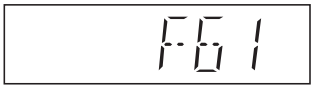
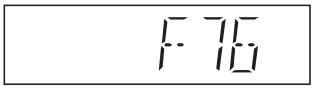
8.6.1. Mechanism Error Code Table

Error Code	Diagnosis Contents	Description of error	Automatic FL Display	Remarks
H01	Tray loading error	The tray opening and closing is abnormal. CLOSE and OPEN of the tray cannot be carried out properly. Loading motor error, DV5 LSI IC (IC8001) error.		Press [■ STOP] on main unit for next error. (OPEN time: OPEN→ CLOSE→OPEN→ H01 at CLOSE: CLOSE →OPEN→CLOSE → H01)
H02	Spindle servo error	The spindle servo/motor is abnormal. The FG pulse is abnormal. CLV servo error.		Press [■ STOP] on main unit for next error.
H03	Traverse servo error	The traverse is abnormal. (Traverse servo, DV5 LSI IC (IC8001), TRV motor error.)		Press [■ STOP] on main unit for next error.
H04	Tracking servo error	Tracking coil NG (OPU unit abnormal), DV5 LSI IC (IC8001) error.		Press [■ STOP] on main unit for next error.
H05	Seek time out error	It is not possible to access the disc. TOC cannot read. Abnormal disc etc. Pickup abnormal or disk is dirty. (TRV motor error, DV5 LSI IC (IC8001) error.)		Press [■ STOP] on main unit for next error.
H07	Driver IC thermal shut down	The spindle motor is abnormal. (short between brushes)		Press [■ STOP] on main unit for next error.
H15	Disc tray open detection switch failure	The disc tray cannot be opened & it closes spontaneously.		Press [■ STOP] on main unit for next error.
H16	Disc tray close detection switch failure	The disc tray cannot be closed & it opens spontaneously.		Press [■ STOP] on main unit for next error.
U11	Focus servo error	Focus coil, FE signal error.		Press [■ STOP] on main unit for next error. (Unfinalized DVD-R is likely to beocme U11.)
U15	Unfinalized DVD-R			
F500	DSC error	DV5 LSI IC (IC8001) stops in the occurance of servo error (startup, focus error, etc)		Press [■ STOP] on main unit for next error.
F506	Invalid media	Disc is flipped over, TOC unreadable, incompatible disc.		Press [■ STOP] on main unit for next error.
F620	OPU unit abnormality temperature	Laser protection at high temperature.		Press [■ STOP] on main unit for next error.
F621	OPU unit circuitry temperature	Laser protection at circuit failure.		Press [■ STOP] on main unit for next error.

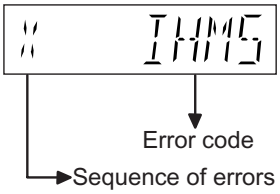
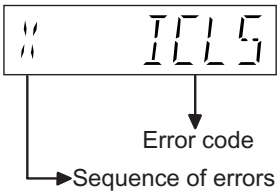
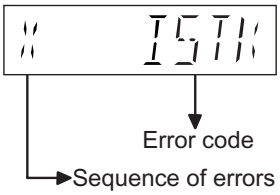
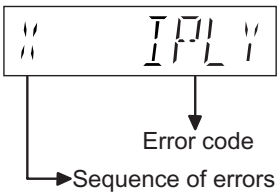
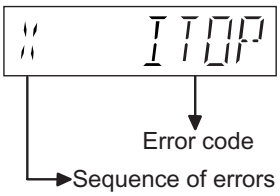
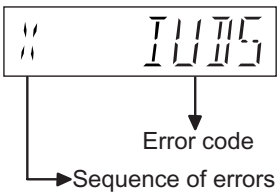
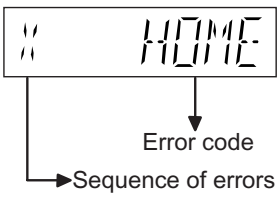
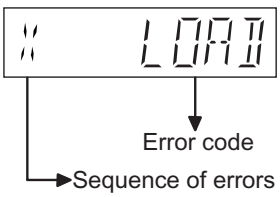
8.6.2. DVD Module Error Code Table

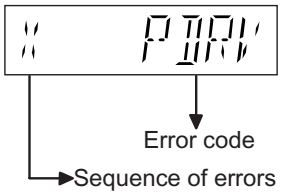
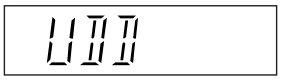
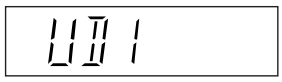
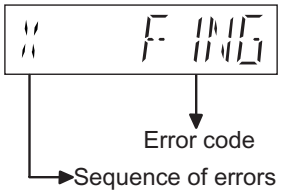
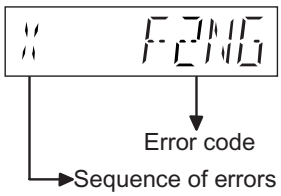
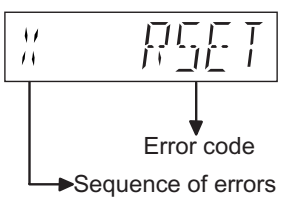
Error Code	Diagnosis Contents	Description of error	Automatic FL Display	Remarks
U702	HDMI/DVI I2C communication error	The communication error of I2C when connecting it with HDMI/DVI. For instance, when EDID information to which information on the TV set side has been described cannot be read, it is generated.		Press [■STOP] on main unit for next error.
U703	HDMI/DVI attestation error	When attestation (HDCP) with the TV side fails when connecting it with HDMI/DVI, it is generated.		Press [■STOP] on main unit for next error.
U704	HDMI/DVI SRM Riborcerar	It is generated at the equipment to which the TV set is Riborced when connecting it with HDMI/DVI.		Press [■STOP] on main unit for next error.
U705	HDMI/DVI SRM disk falsification check error	It is generated at the time of it is time when illegal the SRM data of the reproducing disk (verify error), when connecting it with HDMI/DVI.		Press [■STOP] on main unit for next error.
F740	HDMI device key	I2C error when writing HDMI Key device into transmitter.		Press [■STOP] on main unit for next error.
F893	FLASH ROM IC data falsification error	Firmware error, DV5.0 LSI IC (IC8651) error.		Press [■STOP] on main unit for next error.
F894	EEPROM IC abnormality error	When failing in the access to EEPROM IC located in the DVD Module P.C.B. (IC8611).		Press [■STOP] on main unit for next error.
F895	Language area abnormal	Firmware version agreement check for factory preset setting failure prevention.		Press [■STOP] on main unit for next error.
F897	Initialization error	Incomplete initialization after writing of new firmware (Factory preset setting failure prevention)		Press [■STOP] on main unit for next error.
F899	The communication specification disagreement between micro-processor	Unsuitable combination of number of system com and panel com used. (Frimware)		Press [■STOP] on main unit for next error.

8.6.3. Power Supply & Digital Amplifier Error Code Table

Error Code	Diagnosis Contents	Description of error	Automatic FL Display	Remarks
F61	The abnormalities in an output or power supply circuit of POWER AMP	In normal operation, when DCDET2 goes to "L" (Low) (Not during POWER OFF condition), F61 appears on FLDisplay for 1 second and PCONT goes to "L" (Low).This is due to speaker output has DC voltage or fan is not working.		Press [■STOP] on main unit for next error.
F76	Abnormality in the output voltage of stabilized power supply	In normal operation when DCDET1 is detected "L" (Low) for two consecutive times, F76 is displayed on FL for 1 second and after that PCONT will be turned to "L" (Low). This is due to any of the DC voltages (+9V, +7V, -7V, +5V, +5.3V etc.) C22 not available.		Press [■STOP] on main unit for next error.

8.6.4. CD/DVD Changer Mechanism Error Code Table

Error Code	Diagnosis Contents	Description of error	Automatic FL Display	Remarks
IHMS	Cam gear abnormality	Cam gear does not rotate to "HOME" position		For CD/DVD changer unit (CR14). Press [EXCHANGE] on main unit for next error.
ICSL	Cam gear/gear units abnormal	Cam gear does not rotate to "PLAY" driving position and ence does not drive playing tray to "STOCK" position.		For CD/DVD changer unit (CR14). Press [EXCHANGE] on main unit for next error.
ISTK	Drive rack/gear assembly abnormal	The tray drive rack does not move to "STOCK" position. (Tray does not move to "STOCK" position)		For CD/DVD changer unit (CR14). Press [EXCHANGE] on main unit for next error.
IPLY	Drive rack/gear assembly abnormal	The tray drive rack does not move to "PLAY" position. (Tray does not move to "PLAY" position)		For CD/DVD changer unit (CR14). Press [EXCHANGE] on main unit for next error.
ITOP	UD assembly	UD rack does not move to front position. This lead to UD base not raise to top position		For CD/DVD changer unit (CR14). Press [EXCHANGE] on main unit for next error.
IUDS	UD assembly	After TOP SW is detected, UD rack does not move into tray 1 position.		For CD/DVD changer unit (CR14). Press [EXCHANGE] on main unit for next error.
HOME	Cam gear/gear assembly abnormal	Cam gear does not move to "HOME" position under the following conditions: 1. After tray is loaded to "PLAY" position. 2. After tray is loaded to "STOCK" position.		For CD/DVD changer unit (CR14). Press [EXCHANGE] on main unit for next error.
LOAD	Tray drive assembly abnormal	Tray unit does not move from "STOCK" to "PLAY" position.		For CD/DVD changer unit (CR14). Press [EXCHANGE] on main unit for next error.

Error Code	Diagnosis Contents	Description of error	Automatic FL Display	Remarks
PDRV	Cam gear/gear assembly abnormal	Cam gear does not move from "HOME" to "PLAY" drive position.		For CD/DVD changer unit (CR14). Press [EXCHANGE] on main unit for next error.
UDU	UD base assembly abnormal	UD base assembly does not move upwards from tray 5 to tray 2.		For CD/DVD changer unit (CR14). Press [EXCHANGE] on main unit for next error.
UDD	UD base assembly abnormal	UD base assembly does not move downwards from tray 1 to tray 5.		For CD/DVD changer unit (CR14). Press [EXCHANGE] on main unit for next error.
UD1	UD base assembly abnormal	UD base assembly does not move to tray 1.		For CD/DVD changer unit (CR14). Press [EXCHANGE] on main unit for next error.
F1NG	Fail - safe mode. (For open/close tray unit(s))	When the tray open operation is performed, it fails to open. It will automatically close all trays after the time-out by the microprocessor. During this time when it fails, the error code will appear.		For CD/DVD changer unit (CR14). Press [EXCHANGE] on main unit for next error.
F2NG	Fail - safe mode. (For open/close tray unit(s))	When the tray open operation is performed, it fails to close. It will automatically close all trays after the time-out by the microprocessor. During this time when it fails, the error code will appear.		For CD/DVD changer unit (CR14). Press [EXCHANGE] on main unit for next error.
RSET	Cam gear jam/close sensor faulty	During tray re-open, the cam gear will rotate in the opposite direction to reset the cam gear position. When it fails, the error code will appear.		For CD/DVD changer unit (CR14). Press [EXCHANGE] on main unit for next error.

8.7. Sales Demonstration Lock Function

This function prevents discs from being lost when the unit is used for sales demonstrations by disabling the disc eject function. "LOCKED" is displayed on the unit, and ordinary operation is disabled.

8.7.1. Setting

- **Prohibiting removal of disc**

1. Select the DVD/CD function.
2. At POWER ON condition, press and hold down the ■ button and the power button on the main unit for at least three seconds. (The message, “LOCKED” appears when the function is activated.)

Note:

OPEN/CLOSE ⏏ button is invalid and the main unit displays “LOCKED” while the lock function mode is entered.

- **Prohibiting operation of selector and disc**

1. Select the DVD/CD function.
2. At POWER ON condition, press and hold down the ▶ button and the power button on the main unit for at least three seconds. (The message, “LOCKED” appears when the function is activated.)

Note:

The following buttons are invalid and the main unit displays “LOCKED” while the lock function mode is entered.

Main unit	⏏ OPEN/CLOSE, ■ /-TUNE MODE/—FM MODE, SELECTOR, ⏮ / ◀◀ / ∨ , ∧ / ▶▶⏭ / ⏭
Remote controller unit	iPod/USB, FM/EXT-IN, NUMERIC KEYS 0~9, ≧10 , ⏮ , ⏭ , ◀◀ , ▶▶ , ■ , ⏸ , RETURN, FUNCTIONS, FL DISPLAY/SLEEP, MUTING

8.7.2. Cancellation

The lock can be cancelled by the same procedure as used in setting. ("UNLOCKED" is displayed on cancellation. Disconnecting the power cable from power outlet does not cancel the lock.)

8.8. Service Precautions

8.8.1. Recovery after the DVD player is repaired

- When the FLASH ROM IC or DVD Module P.C.B. is replaced, carry out the recovery processing to optimize the drive.

  Playback the recovery disk to process the recovery automatically.
- Recovery disc (Product number: RFKZD03R005) [SPG]
- Performing recovery process
  1. Load the recovery disc RFKZD03R005 on to the player and run it.
  2. Recovery is performed automatically. When it is finished, a message appears on the screen.
  3. Remove the recovery disc.
  4. Turn off the power.
  5. Initialize the player.

8.8.2. Firmware version-up of the DVD player

- The firmware of the DVD player may be renewed to improve the quality including operability and playability to the substandard discs.processing to optimize the drive.

  The recovery disc has also firmware version-up.
- After version-up, recovery processing is executed automatically.
- Part number of the recovery disc for version-up will be noticed when it is supplied.
- Updating firmware
  1. Load the recovery disc on to the player and run it.
  2. Firmware version of the player is automatically checked. Appropriate message appears whenever necessary.
  3. Using remote controller´s cursor key, select whether version updating is to be done or not. (Selection of Yes/No)
  4. a. If Yes is selected, version updating is performed.

     b. If No is selected, only recovery is performed.
  5. a. When updating is finished, remove the disc according to the message appearing on the screen.

     b. Remove the disc according to the message appearing on the screen.
  6. Turn off the power.

Note:

If the AC power supply is shut out during version-up due to a power failure, the version-up is improperly carried out.

In such a case, replace the FLASH ROM IC and carry out the version-up again.

8.8.3. DVD Module P.C.B. Reset

- When after replacing FLASH ROM IC or DVD Module P.C.B., FL displays error code “ DVD F897”. This means the unit is not initialized properly and the following process needs to be carry out.
- Procedures:
  1. Press ≧10 on remote control while pressing “STOP” button on main unit. (To enter into initialization)
  2. FL display show “INIT”
  3. While still pressing “STOP” button on main unit, press “OK” on remote control. (To reset the unit)
  4. FL will display “RESET” before FL display will change to TOC reading again.
  5. Power off unit. Unplug the AC cord.

6. Power on the unit. It should be no problem. If problem persist check on the DVD Module P.C.B. or FLASH ROM IC.

9 Assembling and Disassembling

“ATTENTION SERVICER”

Be careful when disassembling and servicing.

Some chassis components may have sharp edges.

Special Note:

1. **This section describes the disassembly procedures for all the major printed circuit boards and main components.**
2. **Before the disassembly process was carried out, do take special note that all safety precautions are to be carried out. (Ensure that no AC power supply is connected during disassembling.)**
3. **For assembly after operation checks or replacement, reverse the respective procedures. Special reassembly procedures are described only when required.**
4. **Do take note of the locators on each printed circuit board during reassembling procedures.**
5. **The Switch Regulator IC may have high temperature after prolonged use.**
6. **Use caution when removing the top cabinet and avoid touching heat sinks located in the unit.**

CAUTION: HOT!!
PLEASE DO NOT
TOUCH THE HEAT SINK

7. **Select items from the following index when checks or replacement are required.**

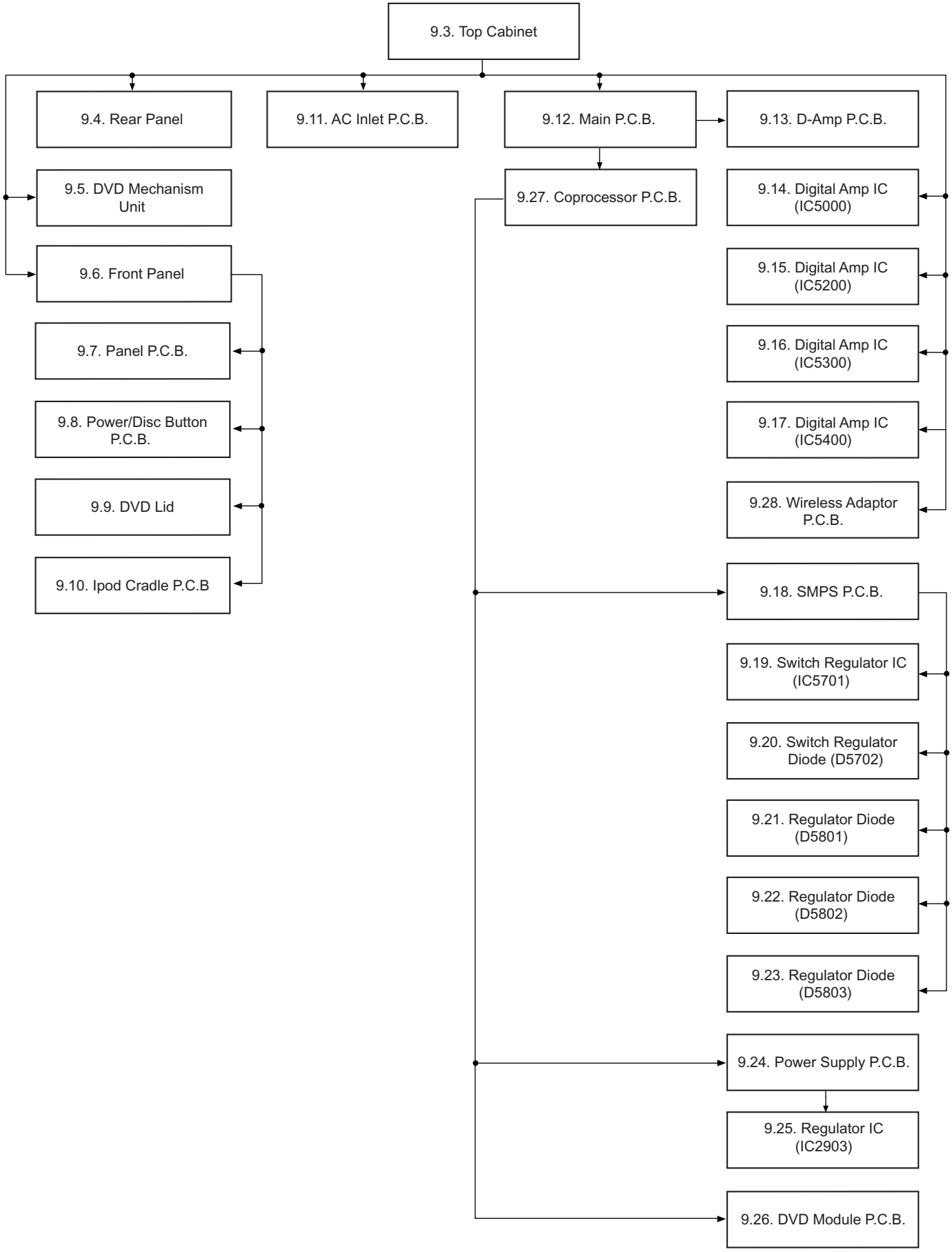
- Disassembly of Top Cabinet
- Disassembly of Rear Panel
- Disassembly of DVD Mechanism Unit
- Disassembly of Front Panel
- Disassembly of Panel P.C.B.
- Disassembly of Power/Disc Button P.C.B.
- Disassembly of DVD Lid
- Disassembly of Ipod Cradle P.C.B.
- Disassembly of AC Inlet P.C.B.
- Disassembly of Main P.C.B.
- Disassembly of D-Amp P.C.B.
- Replacement of Digital Amp IC (IC5000)
- Replacement of Digital Amp IC (IC5200)
- Replacement of Digital Amp IC (IC5300)
- Replacement of Digital Amp IC (IC5400)
- Disassembly of SMPS P.C.B.
- Replacement of Switch Regulator IC (IC5701)
- Replacement of Switch Regulator Diode (D5702)
- Replacement of Regulator Diode (D5801)
- Replacement of Regulator Diode (D5802)
- Replacement of Regulator Diode (D5803)
- Replacement of Power Supply P.C.B.
- Replacement of Regulator IC (IC2903)
- Disassembly of DVD Module P.C.B.
- Disassembly of Coprocessor P.C.B.
- Disassembly of Wireless Adapter P.C.B.

CAUTION NOTE:
Please use original screw and at correct locations.

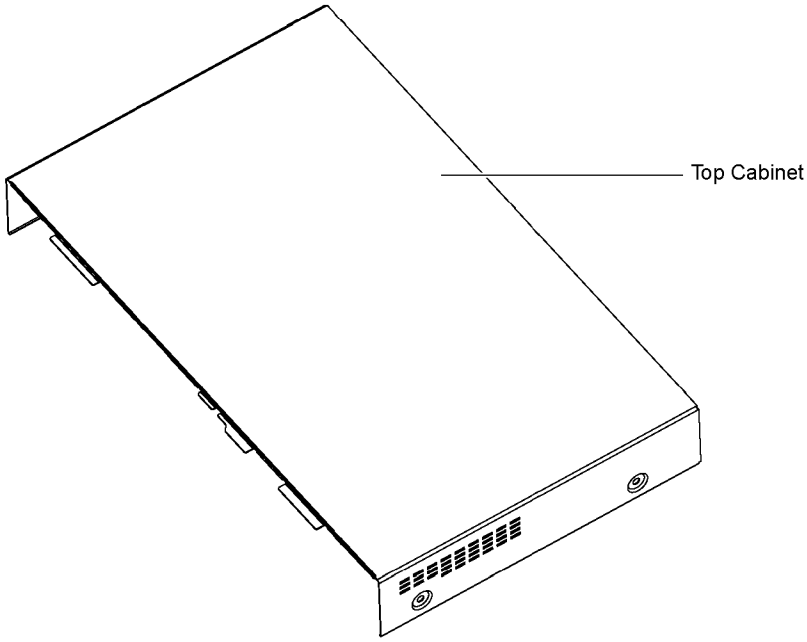
Below shown is part no. of different screw types used:

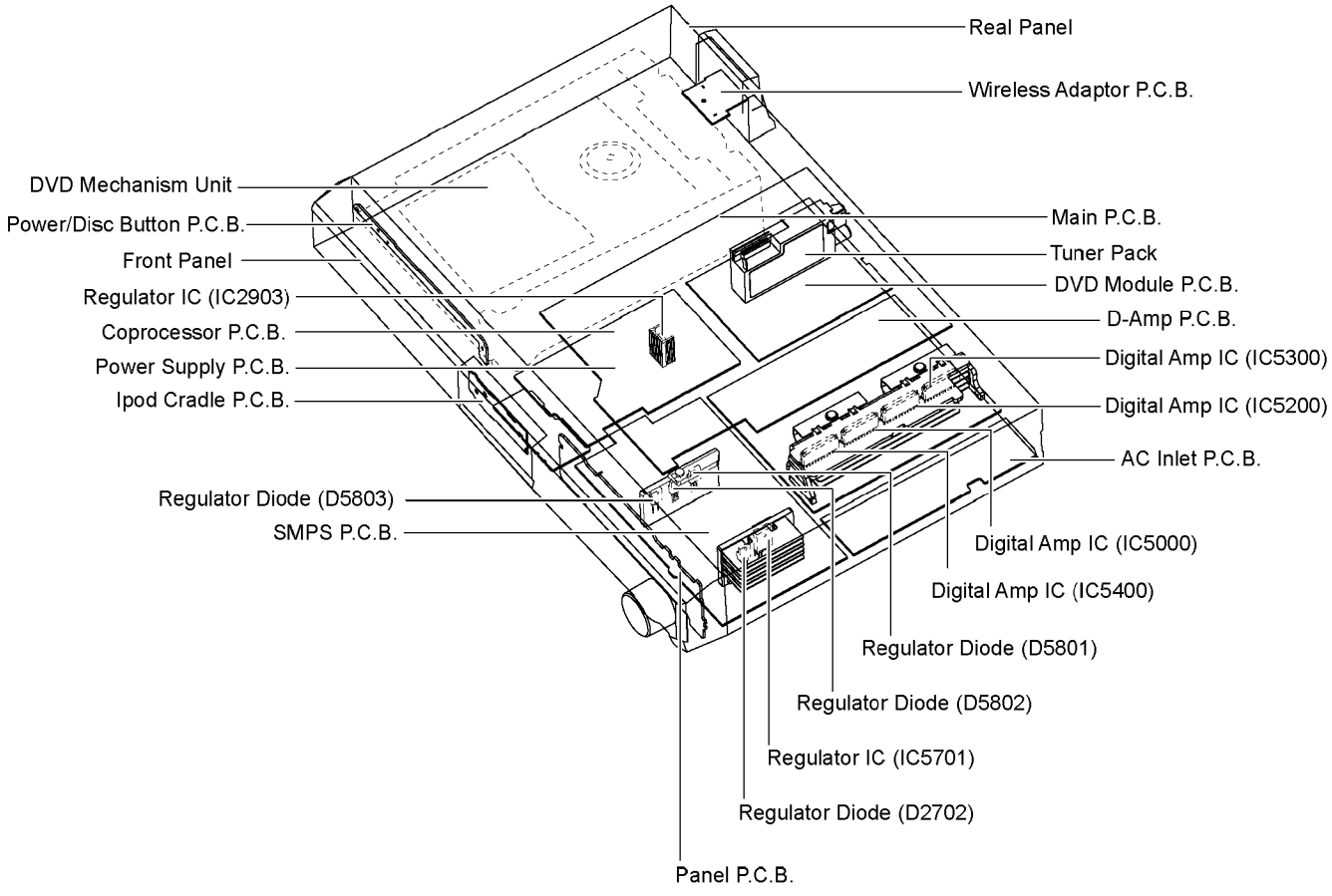
- ⓐ :RHD30007-K2J
- ⓑ :RHD30119-S
- ⓒ :XSN3+4FJ
- ⓓ :RHD30070
- ⓔ :RHD26046
- ⓕ :VHD1224-1
- ⓖ :RHD30111-3
- ⓗ :XTW3+8TFJ
- ⓘ :XTB3+10JFJ
- ⓙ :XTB3+8JFJ
- ⓚ :RHD30090-1

9.1. Disassembly Flow Chart



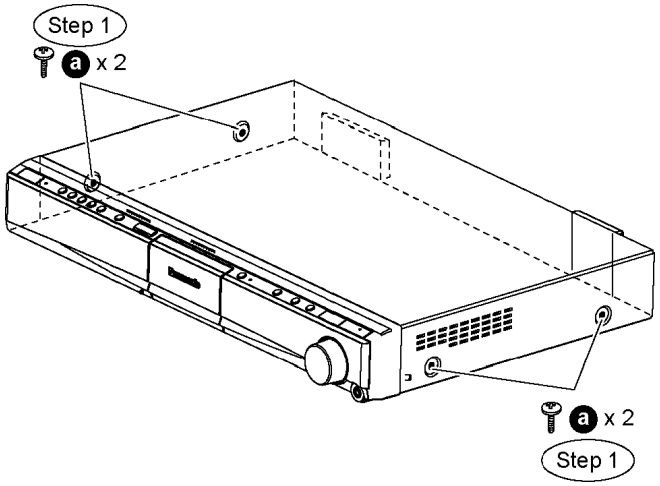
9.2. Main Components and P.C.B. Locations



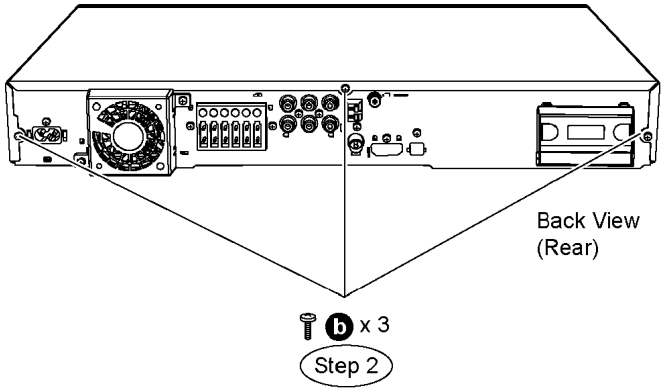


9.3. Disassembly of Top Cabinet

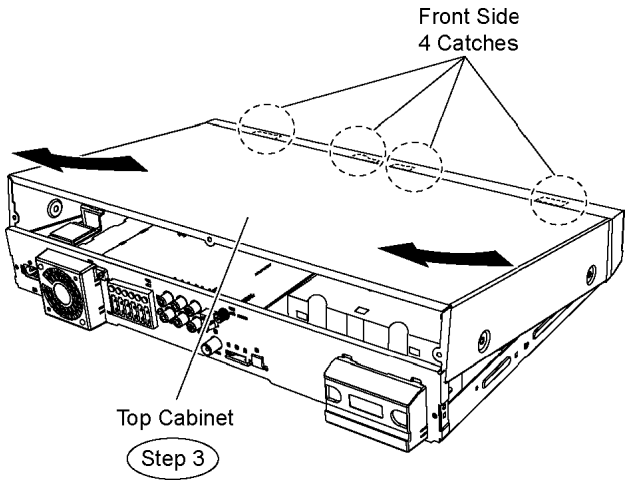
Step 1 Remove 4 screws at the side of the top cabinet.



Step 2 Remove 3 screws at the rear of the top cabinet.



Step 3 Lift up the back part of the top cabinet and remove it in the direction of arrows.



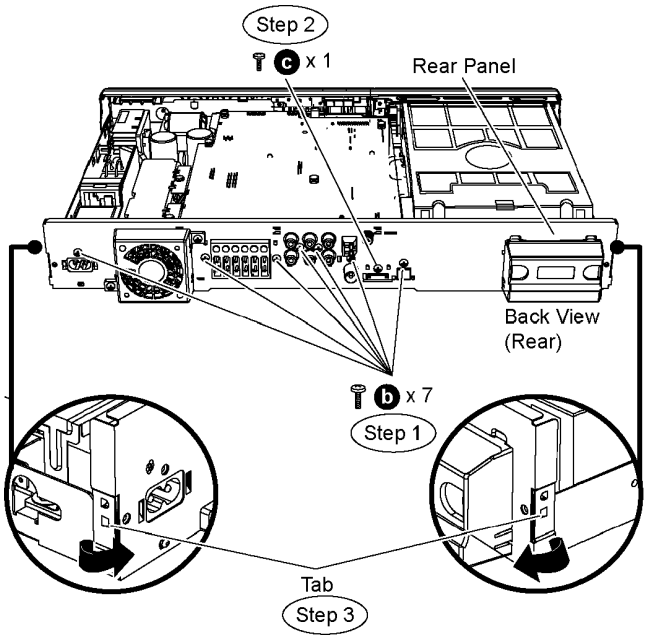
9.4. Disassembly of Rear Panel

- Follow (Step 1) to (Step 3) of Item 9.3.

Step 1 Remove 7 screws at the rear panel.

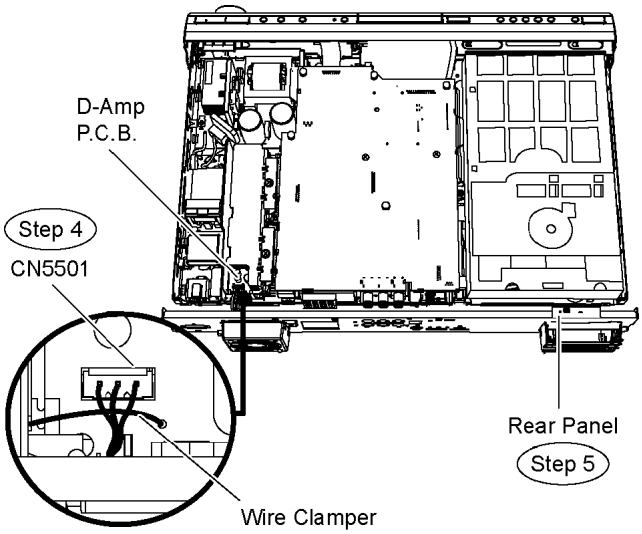
Step 1 Remove 1 screws at the rear panel.

Step 3 Release the tab of each side of the rear panel in the direction of arrow.



Step 4 Remove the wire clamper to detach the fan unit connector (CN5501) on D-Amp P.C.B.

Step 5 Remove the rear panel.

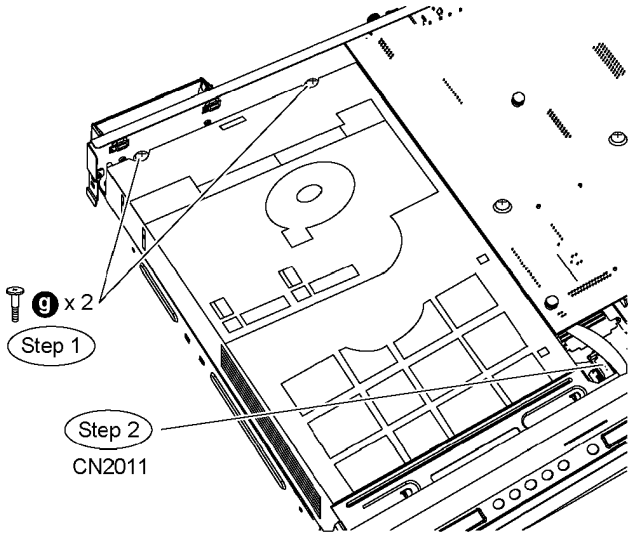


9.5. Disassembly of DVD Mechanism Unit

- Follow (Step 1) to (Step 3) of Item 9.3.

Step 1 Remove 2 screws from DVD mechanism unit.

Step 2 Detach 11P FFC cable at the connector (CN2011) on Power Supply P.C.B.

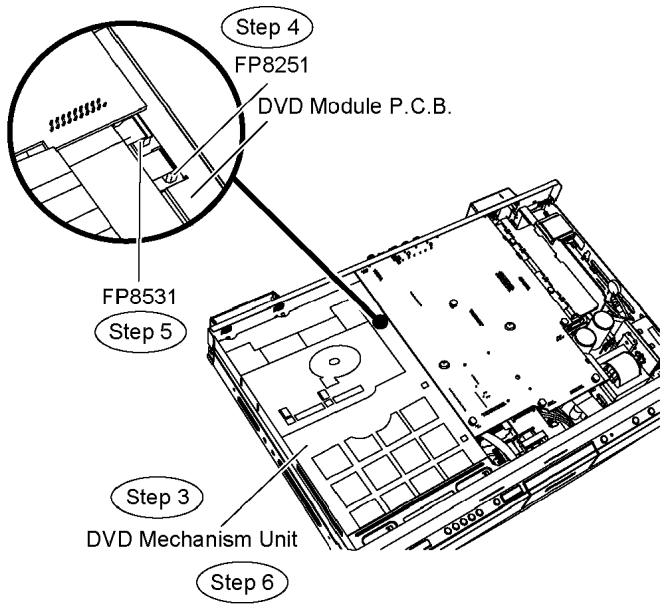


Step 3 Move aside DVD mechanism unit and position it according to the diagram show.

Step 4 Detach 7P FFC cable at the connector (FP8251) on DVD Module P.C.B.

Step 5 Detach 26P FFC cable at the connector (FP8531) on DVD Module P.C.B.

Step 6 Remove the DVD mechanism unit.



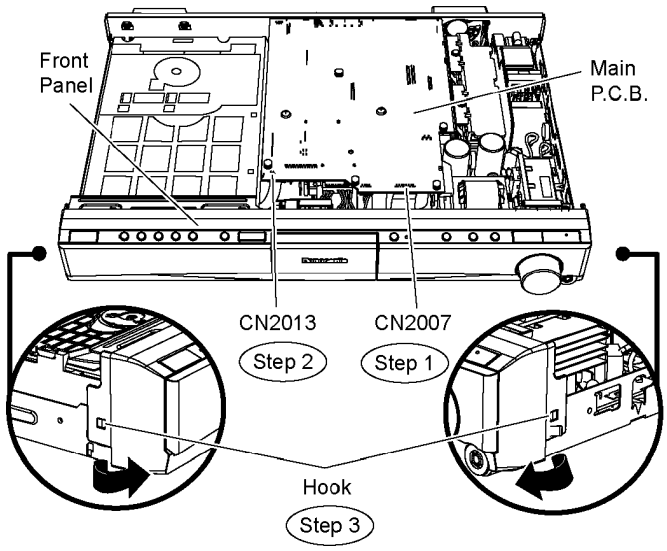
9.6. Disassembly of Front Panel

- Follow (Step 1) to (Step 3) of Item 9.3.

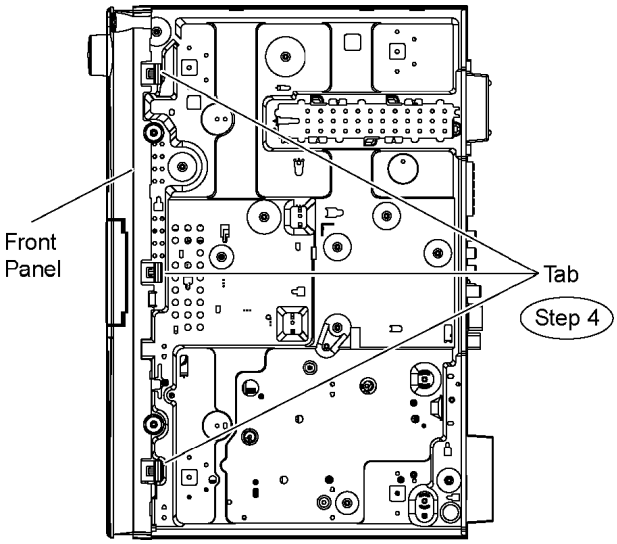
Step 1 Detach 17P FFC cable at the connector (CN2007) on Main P.C.B.

Step 2 Detach 4P FFC cable at the connector (CN2013) on Main P.C.B.

Step 3 Release the hook at each side of the front panel in the direction of arrow.



Step 4 Release the tabs at the bottom of the front panel.

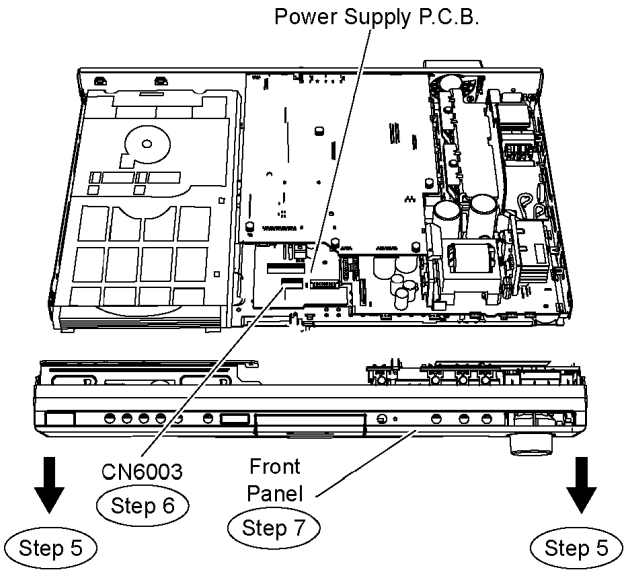


Caution: Do not exert strong force when releasing the tabs.

Step 5 Detach the front panel slightly forward in the direction of arrows.

Step 6 Detach 14P cable at the connector (CN6003) on Power Supply P.C.B.

Step 7 Remove the front panel.

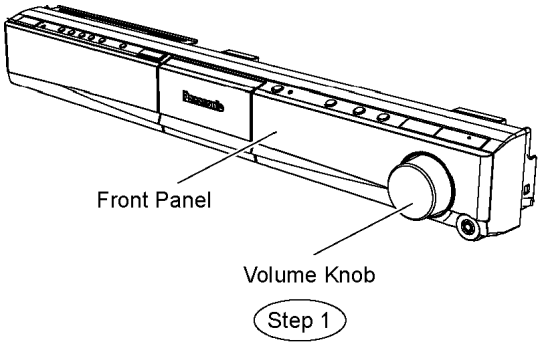


Caution: Do not attempt to exert strong force when detaching the front panel.

9.7. Disassembly of Panel P.C.B.

- Follow (Step 1) to (Step 3) of Item 9.3.
- Follow (Step 1) to (Step 7) of Item 9.6.

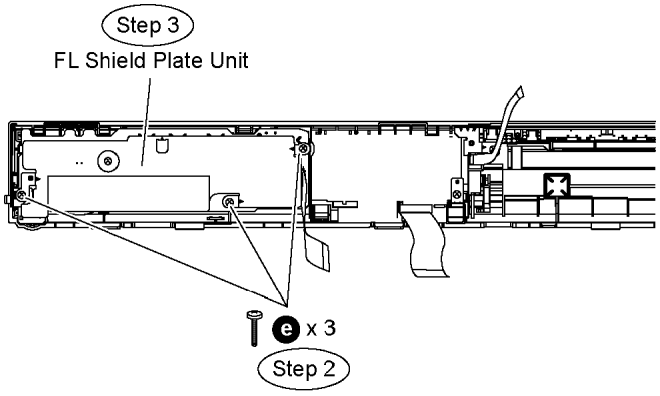
Step 1 Remove the volume knob.



- Disassembly of FL shield plate unit.

Step 2 Remove 3 screws from the FL shield plate unit.

Step 3 Remove the FL shield plate unit.



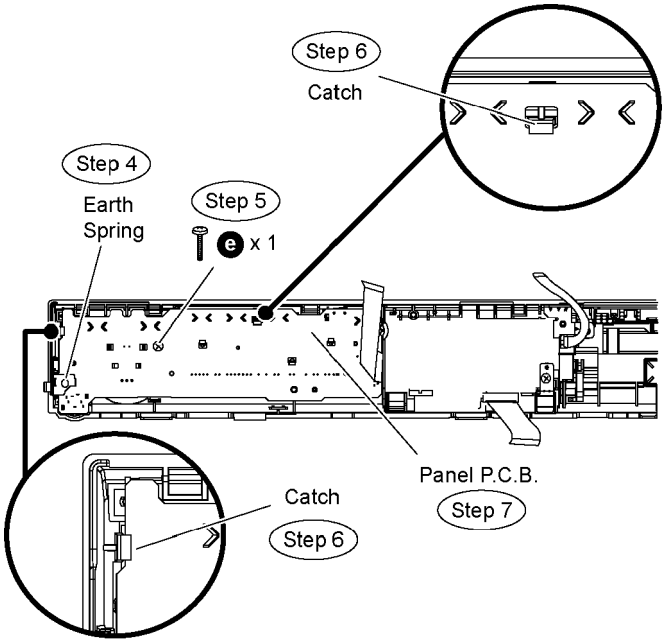
Caution Note: Keep the FL shield plate unit in safe place. Avoid denting it. Place it back during assembling.

Step 4 Remove the earth spring.

Step 5 Remove 1 screw on Panel P.C.B.

Step 6 Release the catch.

Step 7 Remove Panel P.C.B.



Caution Note: Keep the earth spring in safe place. Avoid denting it. Place it back during assembling.

9.8. Disassembly of Power/Disc Button P.C.B.

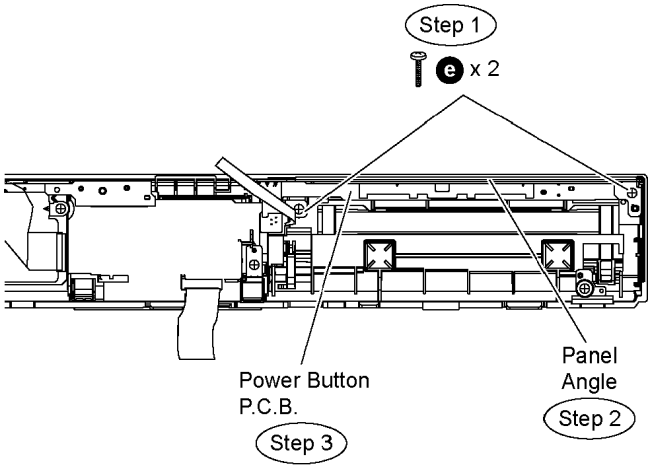
- Follow (Step 1) to (Step 3) of Item 9.3.
- Follow (Step 1) to (Step 7) of Item 9.6.

- Disassembly of Panel Angle.

Step 1 Remove 2 screws from the panel angle.

Step 2 Remove the panel angle.

Step 3 Remove Power/Disc Button P.C.B.



Caution Note: Keep the panel angle in safe place. Avoid denting it. Place it back during assembling.

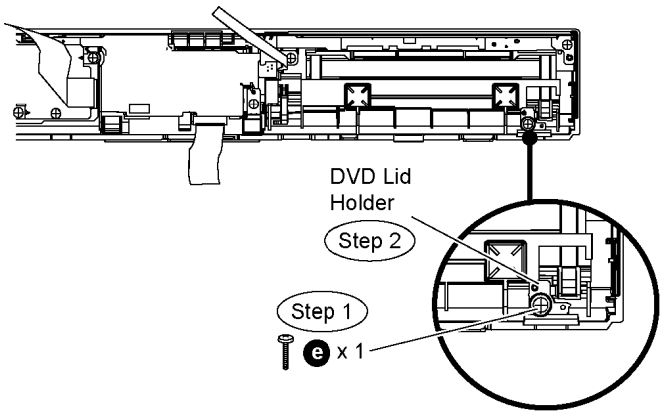
9.9. Disassembly of DVD Lid

- Follow (Step 1) to (Step 3) of Item 9.3.
- Follow (Step 1) to (Step 7) of Item 9.6.

● Disassembly of DVD Lid Holder

Step 1 Remove 1 screw from the DVD lid holder.

Step 2 Remove the DVD lid holder.



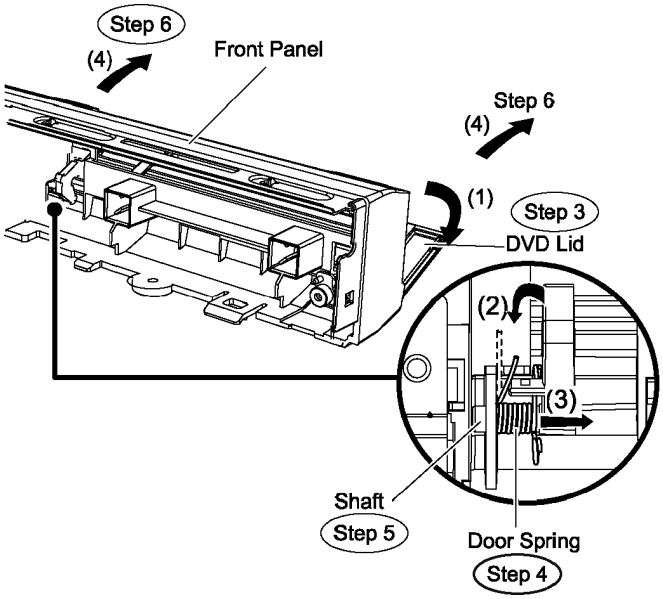
Caution Note: Keep the DVD lid holder in safe place. Avoid denting it. Place it back during assembling.

Step 3 Open the DVD lid in the direction of arrow (1), until it is aligned parrallel with the front panel.

Step 4 Lift the door spring in the direction of arrow (2).

Step 5 Move the shaft of the DVD lid in the direction of arrow (3).

Step 6 Remove the DVD lid in the direction of arrow (4).



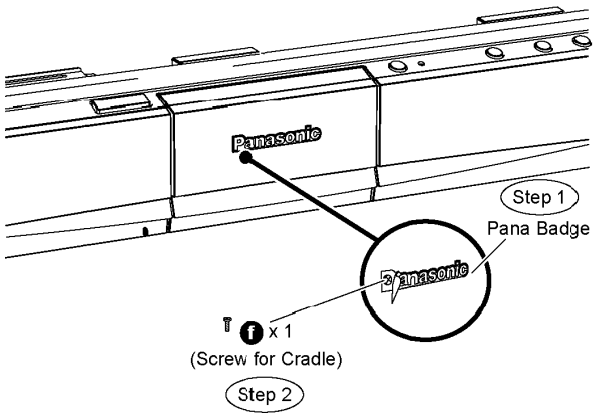
9.10. Disassembly of Ipod Cradle P.C.B.

● Follow (Step 1) to (Step 3) of Item 9.3.

● Follow (Step 1) to (Step 7) of Item 9.6.

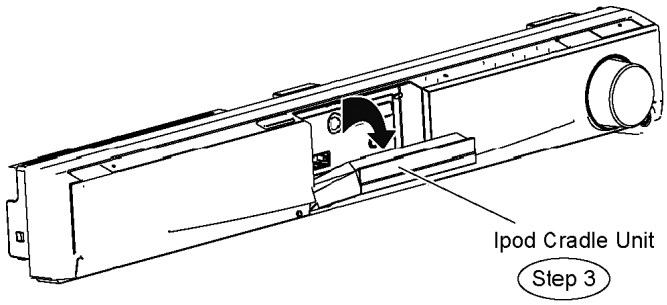
Step 1 Peel off the portion of the pana badge (paste type) with a pen knife.

Step 2 Remove the screw for cradle.



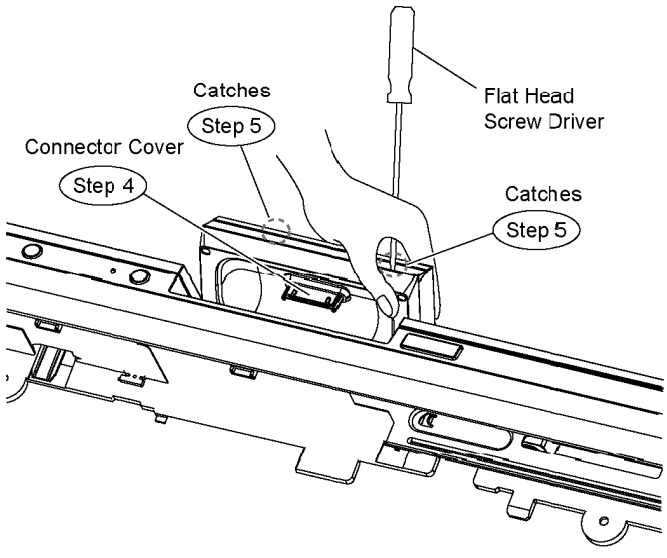
Caution Note: Keep the screw in safe place. Place it back during assembling.

Step 3 Flip the Ipod cradle unit for 45 degree as the direction of arrow.

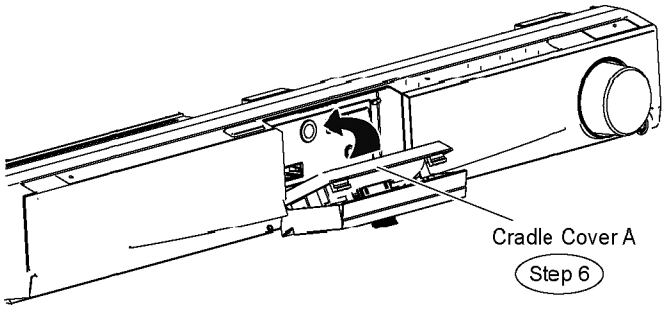


Step 4 Remove theconnector cover.

Step 5 Use a flat head screwdriver (0.5-0.7mm) to release the catches according to the diagram show.

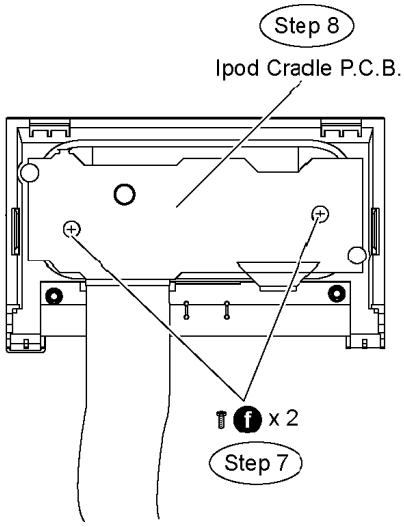


Step 6 Remove cradle cover A as the direction of arrow.



Step 7 Remove 2 screws on the Ipod cradle P.C.B.

Step 8 Remove Ipod cradle P.C.B.

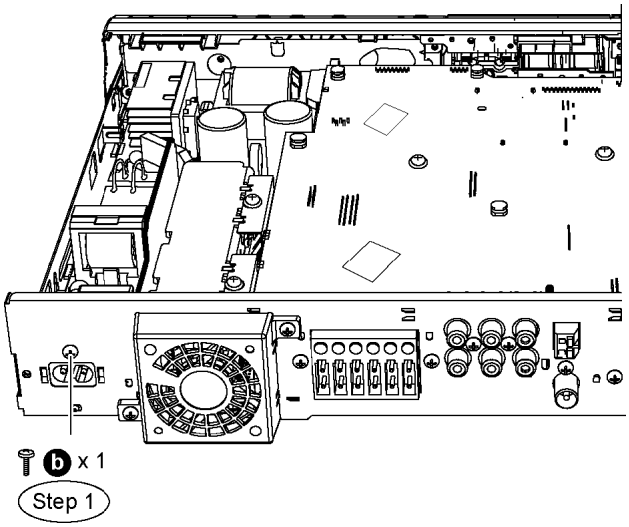


9.11. Disassembly of AC Inlet P.C.B.

- Follow (Step 1) to (Step 3) of Item 9.3.

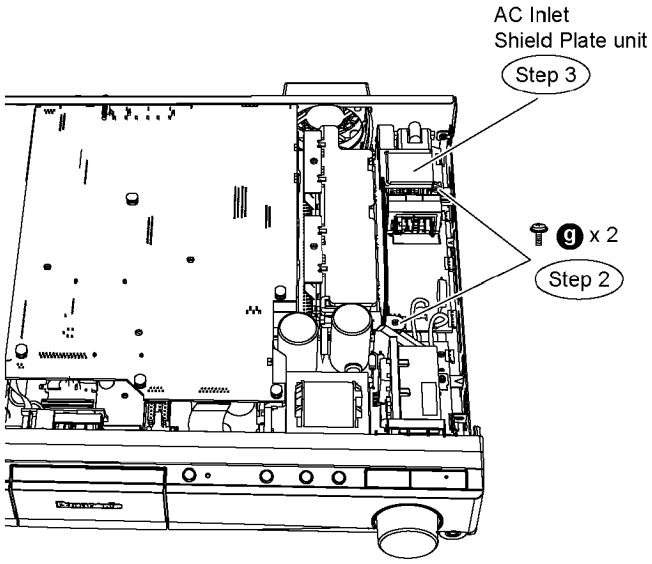
- Disassembly of AC Inlet Shield Plate Unit.

Step 1 Remove 1 screw at the rear panel.



Step 2 Remove 2 screws from the AC Inlet shield plate unit.

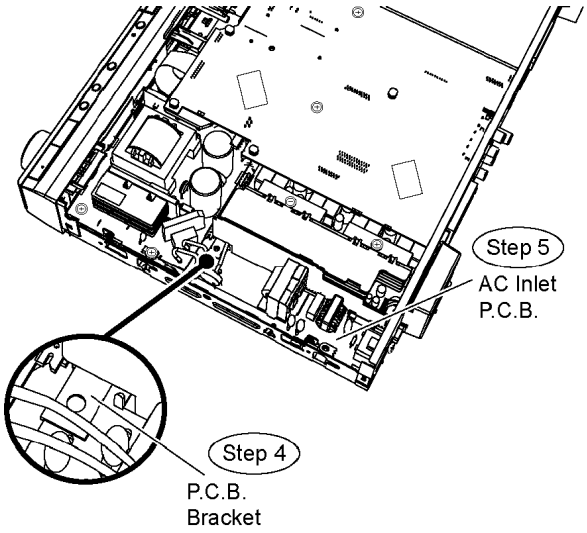
Step 3 Remove the AC Inlet shield plate unit.



Caution Note: Keep the AC Inlet shield plate unit in safe place. Avoid denting it. Place it back during assembling.

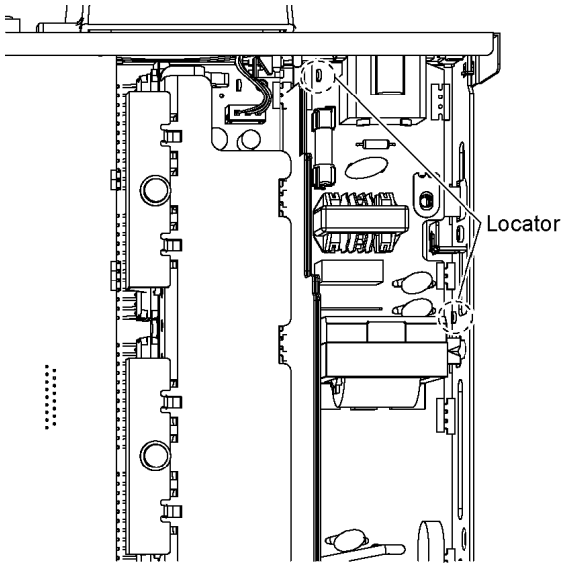
Step 4 Remove the P.C.B. bracket.

Step 5 Remove AC Inlet P.C.B.



Caution Note: Keep the P.C.B. bracket in safe place. Avoid denting it. Place it back during assembling.

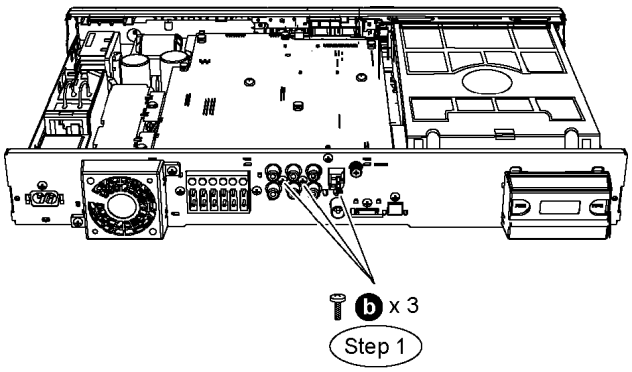
Special Note: During reassembling procedures, ensure the P.C.B. is seated properly at the locators.



9.12. Disassembly of Main P.C.B.

● Follow (Step 1) to (Step 3) of Item 9.3.

Step 1 Remove 3 screws at the rear panel.



Step 2 Remove 2 screws on Main P.C.B.

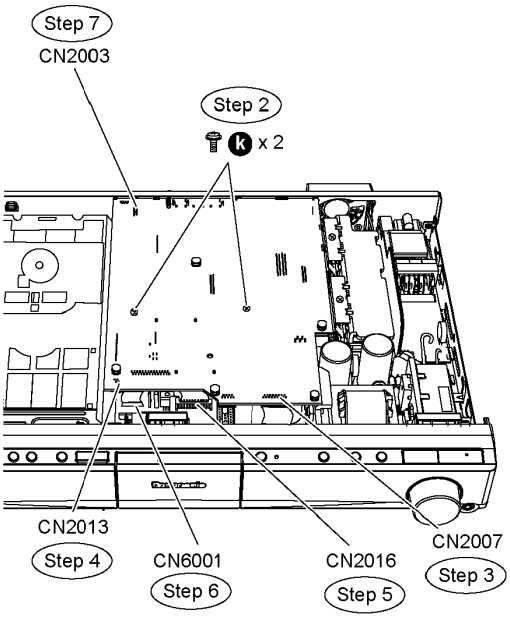
Step 3 Detach 17P FFC cable at the connector (CN2007) on the Main P.C.B.

Step 4 Detach 4P FFC cable at the connector (CN2013) on the Main P.C.B.

Step 5 Detach 13P cable at the connector (CN2016) on the Power Supply P.C.B.

Step 6 Detach 28P cable at the connector (CN6001) on the Power Supply P.C.B.

Step 7 Detach 14P cable at the connector (CN2003) on the Main P.C.B.



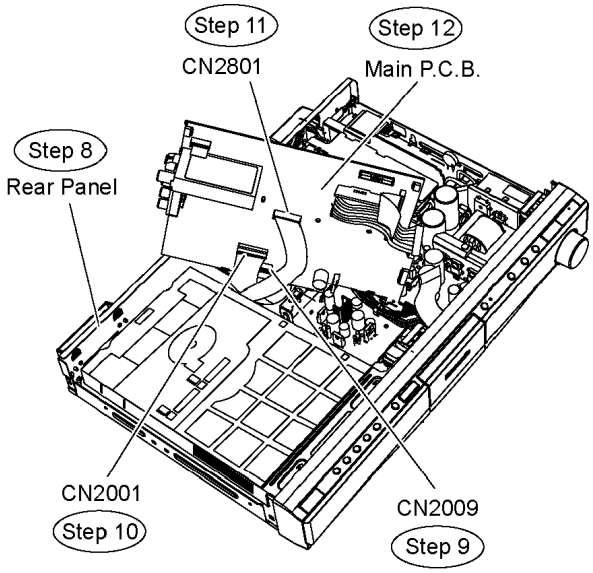
Step 8 Detach Main P.C.B. from the rear panel.

Step 9 Turn over Main P.C.B. to detach 17P FFC cable at the connector (CN2009) on the Main P.C.B.

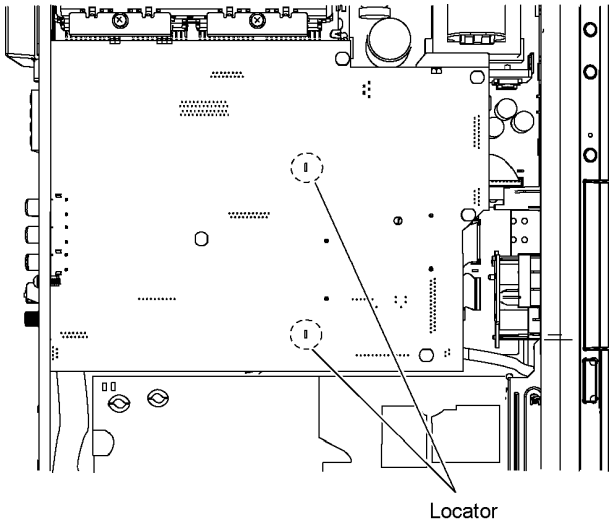
Step 10 Detach 50P FFC cable at the connector (CN2001) on the Main P.C.B.

Step 11 Detach 22P FFC cable at the connector (CN2801) on the Main P.C.B.

Step 12 Remove Main P.C.B.



Special Note: During reassembling procedures, ensure the P.C.B. is seated properly at the locators.



9.13. Disassembly of D-Amp P.C.B.

- Follow (Step 1) to (Step 3) of Item 9.3.
- Follow (Step 1) to (Step 4) of Item 9.11.
- Follow (Step 1) to (Step 5) of Item 9.12.

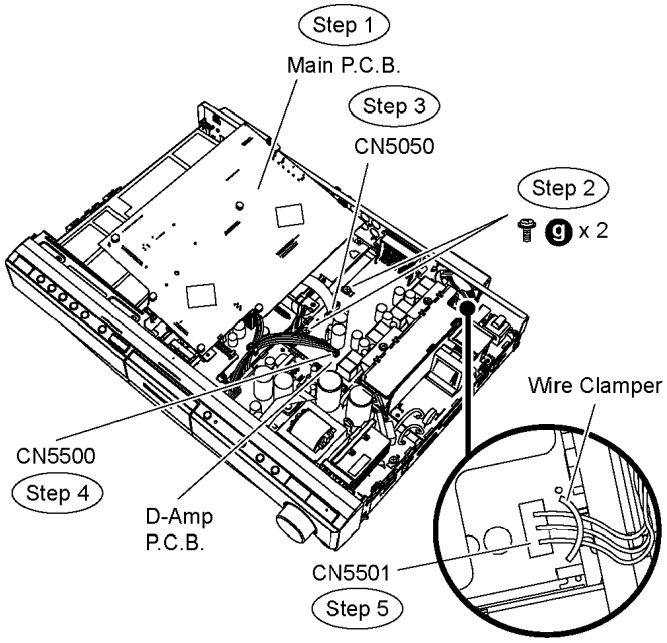
Step 1 Move aside Main P.C.B. and position it according to the diagram shown.

Step 2 Remove 2 screws on D-Amp P.C.B.

Step 3 Detach 17P cable at the connector (CN5050) on D-Amp P.C.B.

Step 4 Detach 8P cable at the connector (CN5500) on D-Amp P.C.B.

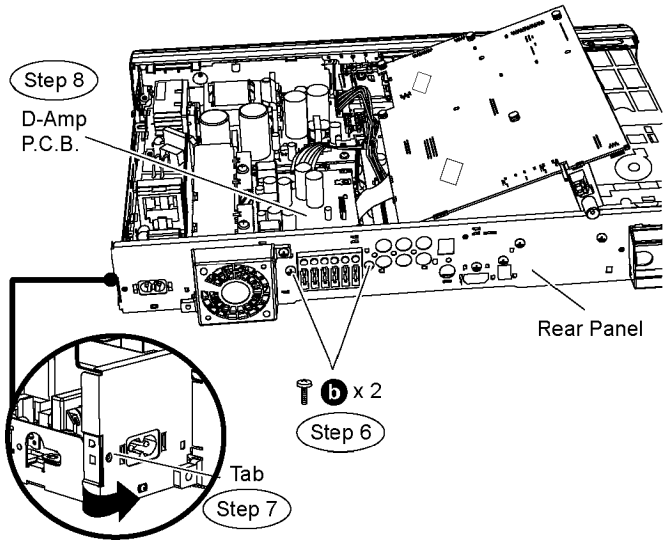
Step 5 Twist the wire clamper to detach 3P cable at the connector (CN5501) on D-Amp P.C.B.



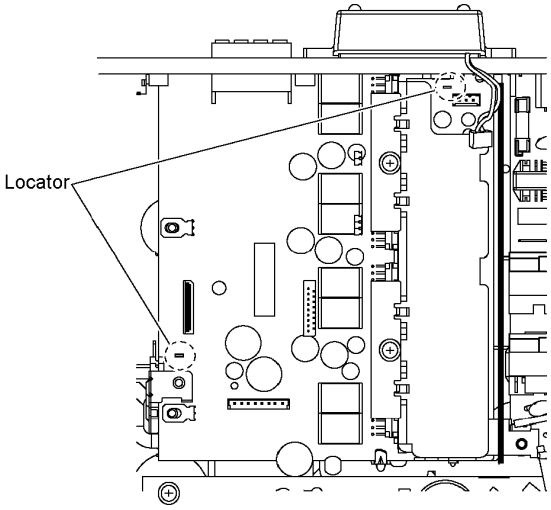
Step 6 Remove 2 screws at the rear panel.

Step 7 Release the tab of the rear panel in the direction of arrow.

Step 8 Remove D-Amp P.C.B.



Special Note: During reassembling procedures, ensure the P.C.B. is seated properly at the locators.

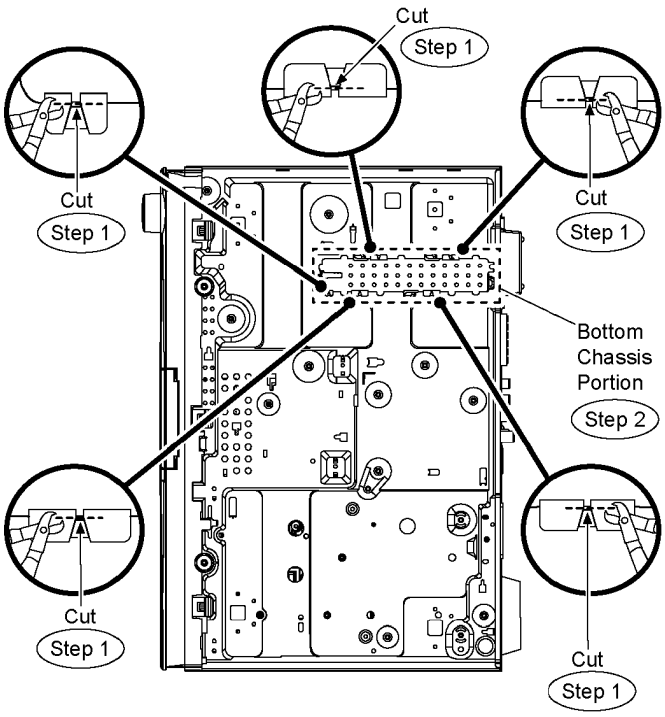


9.14. Replacement of Digital Amp IC (IC5000)

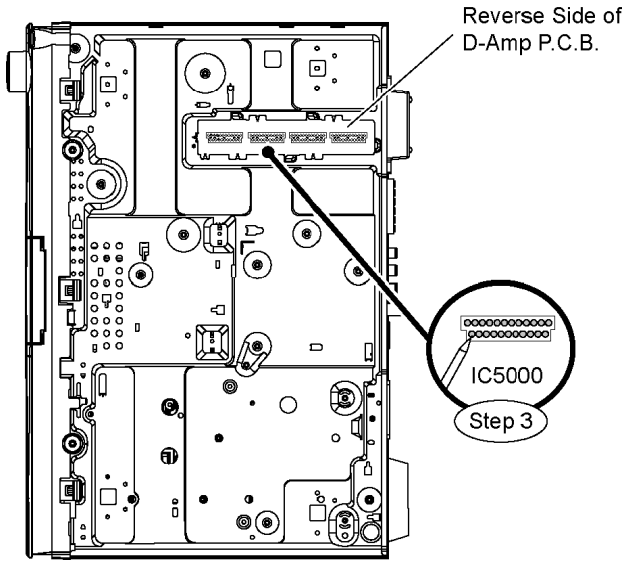
- Follow (Step 1) to (Step 3) of Item 9.3.

Step 1 Cut the 5 connecting points as indicated in the diagram.

Step 2 Detach the marked portion from the bottom chassis.



Step 3 Desolder pins of the digital amp IC (IC5000) on the reverse side of D-Amp P.C.B.

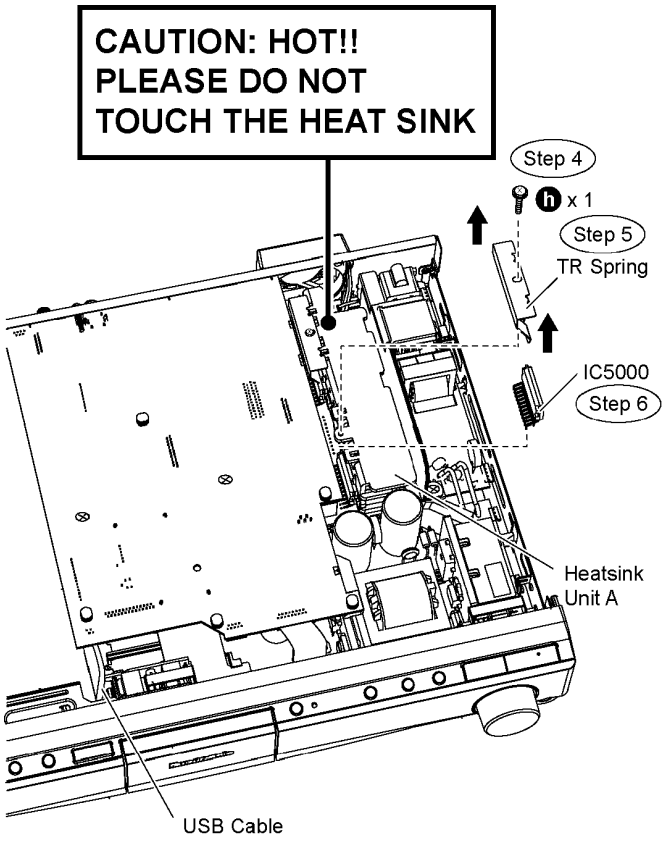


Step 4 Remove 1 screw from the TR spring.

Step 5 Remove the TR spring in the direction of arrows.

Step 6 Remove the digital amp IC (IC5000) from the heatsink unit A.

Caution: Handle the heatsink unit A with caution due to its high temperature after prolonged use. Touching it may lead to injuries.



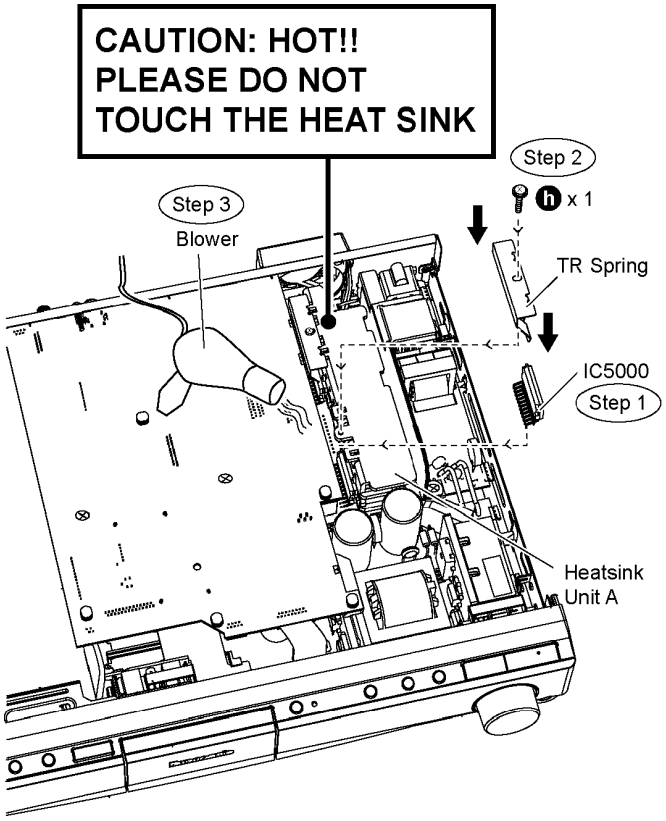
Note: Refer to the diagrams of D-Amp P.C.B. (Item 20.4.) for location of the part.

9.14.1. Assembly of the Digital Amp IC (IC5000)

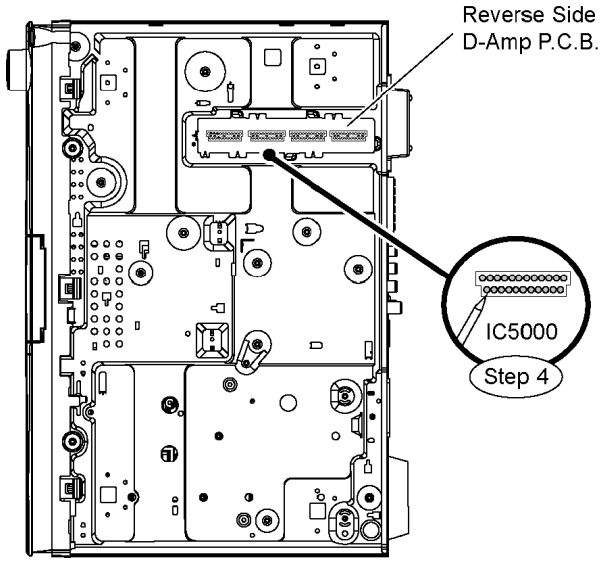
Step 1 Fix the digital amp IC (IC5000) to the heatsink unit A.

Step 2 Screw the TR spring to the heatsink unit A.

Step 3 Use a blower to remove the minute particles that might be caused after the process of the screwing TR spring to the heatsink unit A.



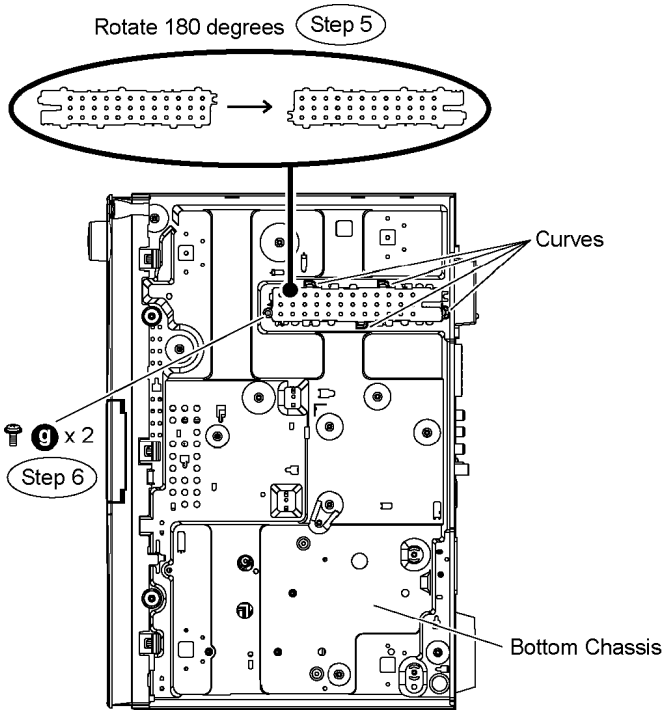
Step 4 Solder pins of the digital amp IC (IC5000) on the reverse side of D-Amp P.C.B.



Special Note: Ensure pins of the digital amp IC (IC5000) are properly seated and soldered on D-Amp P.C.B.

Step 5 Position the bottom chassis portion into the curves according to the diagram shown. (Rotate the part at 180 degrees as compared to its original position)

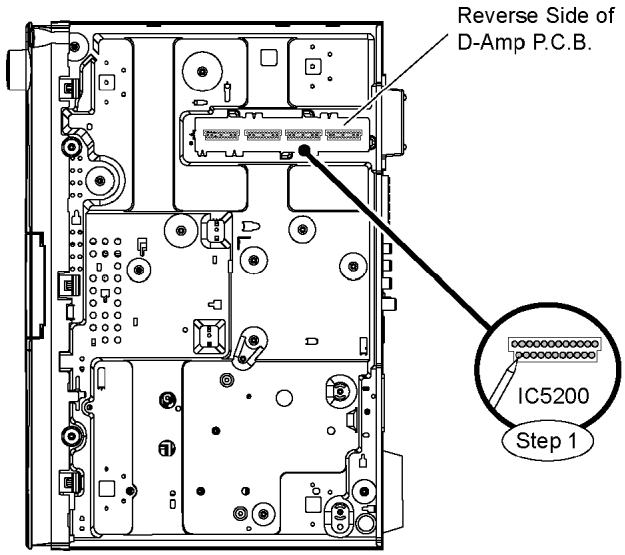
Step 6 Screw the portion to the bottom chassis.



9.15. Replacement of Digital Amp IC (IC5200)

- Follow (Step 1) to (Step 3) of Item 9.3.
- Follow (Step 1) to (Step 2) of Item 9.14.

Step 1 Desolder pins of the digital amp IC (IC5200) on the reverse side of D-Amp P.C.B.

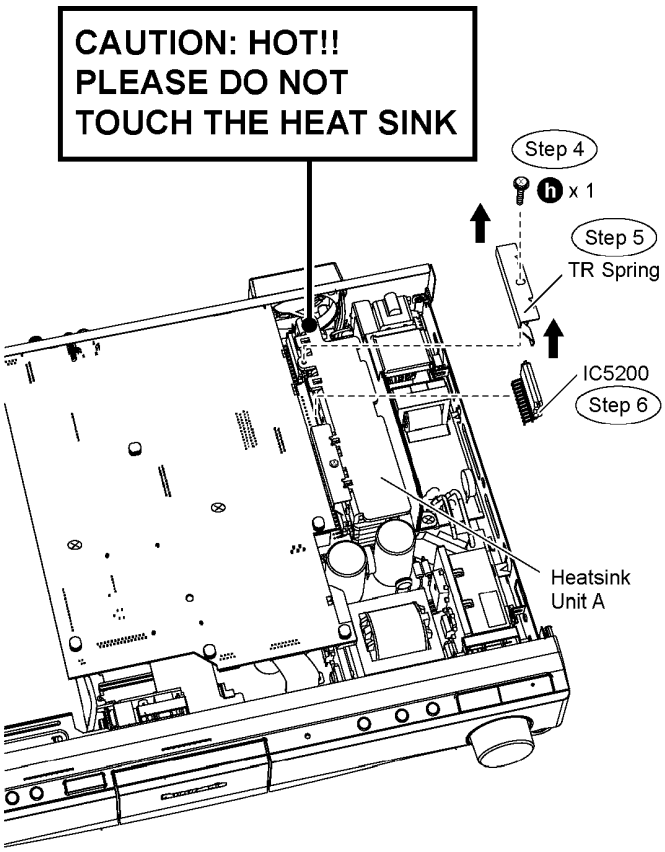


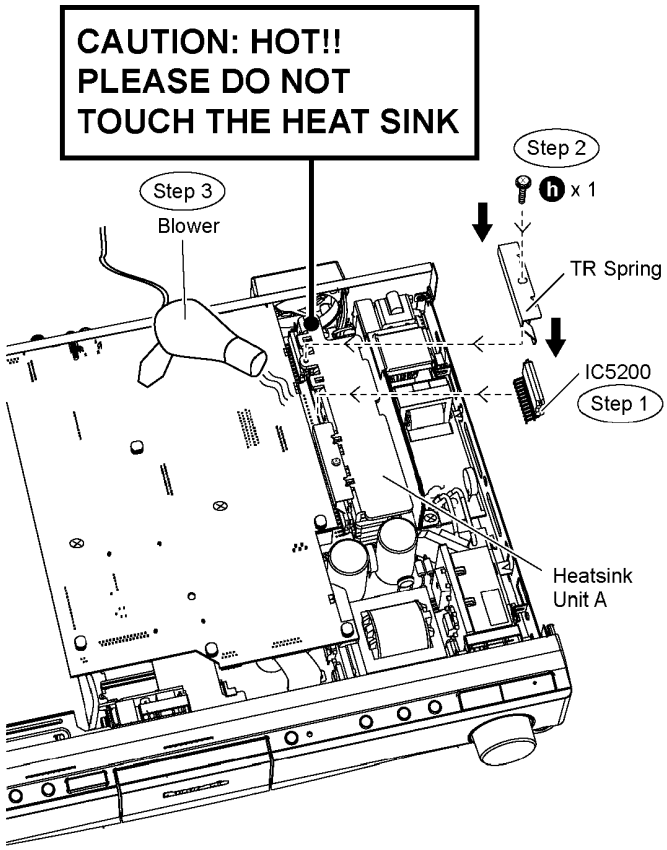
Step 2 Remove 1 screw.

Step 3 Remove the TR spring in the direction of arrows.

Step 4 Remove the digital amp IC (IC5200) from the heatsink unit A.

Caution: Handle the heatsink unit A with caution due to its high temperature after prolonged use. Touching it may lead to injuries.





Note: Refer to the diagrams of D-Amp P.C.B. (Item 20.4.) for location of the part.

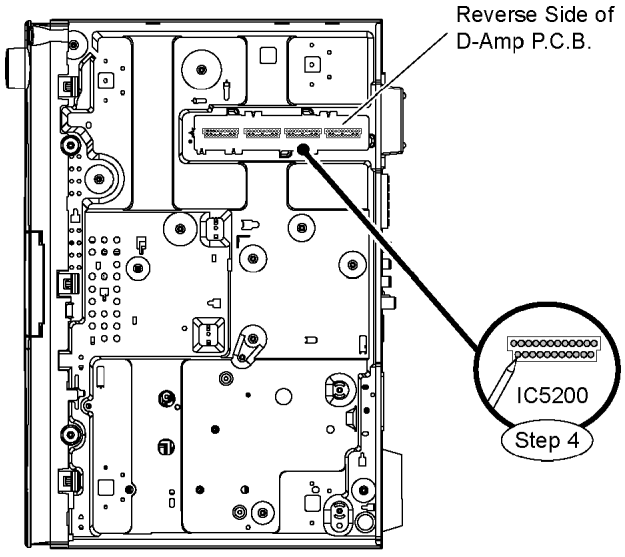
9.15.1. Assembly of the Digital Amp IC (IC5200)

Step 1 Fix the digital amp IC (IC5200) to the heatsink unit A.

Step 2 Screw the TR spring to the heatsink unit A.

Step 3 Use a blower to remove the minute particles that might be caused after the process of the screwing TR spring to the heatsink unit A.

Step 4 Solder pins of the digital amp IC (IC5200) on the reverse side of D-Amp P.C.B.



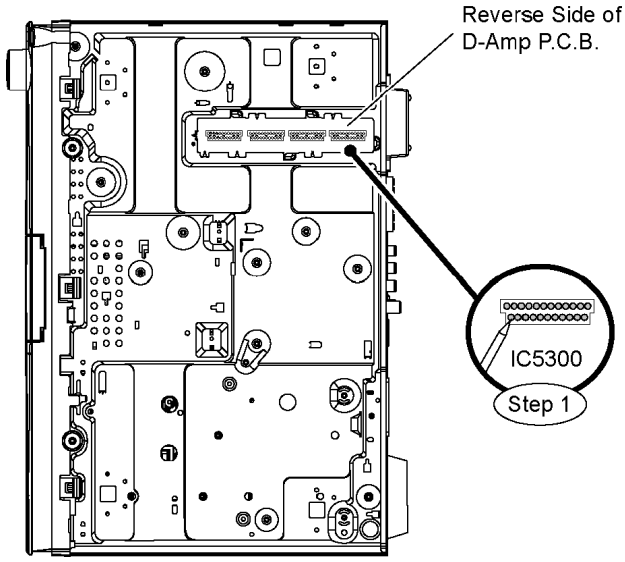
Special Note: Ensure pins of the digital amp IC (IC5200) are properly seated and soldered on D-Amp P.C.B.

Step 5 Follow (Step 5) to (Step 6) of Item 9.15.1.

9.16. Replacement of Digital Amp IC (IC5300)

- Follow (Step 1) to (Step 3) of Item 9.3.
- Follow (Step 1) to (Step 2) of Item 9.14.

Step 1 Desolder pins of the digital amp IC (IC5300) on the reverse side of D-Amp P.C.B.

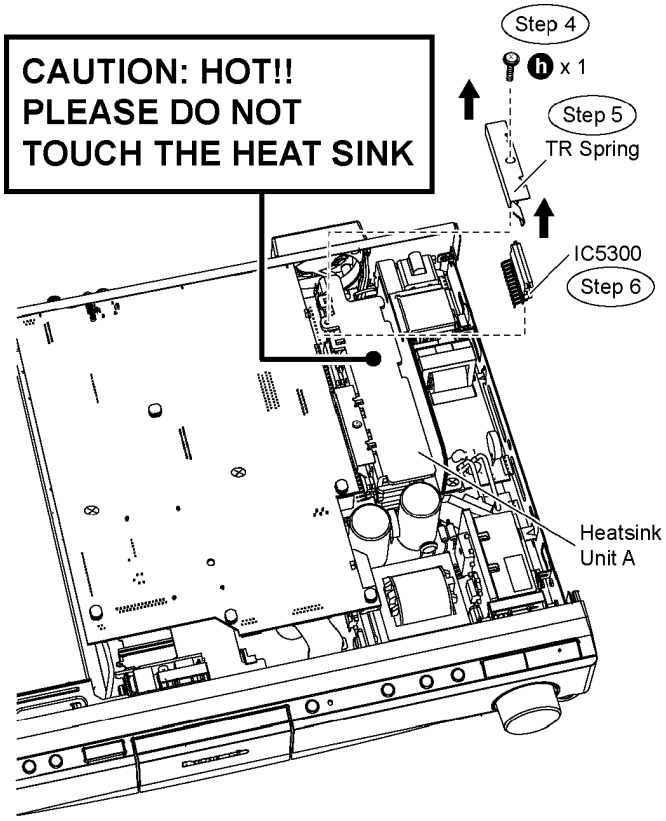


Step 2 Remove 1 screw.

Step 3 Remove the TR spring in the direction of arrows.

Step 4 Remove the digital amp IC (IC5300) from the heatsink unit A.

Caution: Handle the heatsink unit A with caution due to its high temperature after prolonged use. Touching it may lead to injuries.



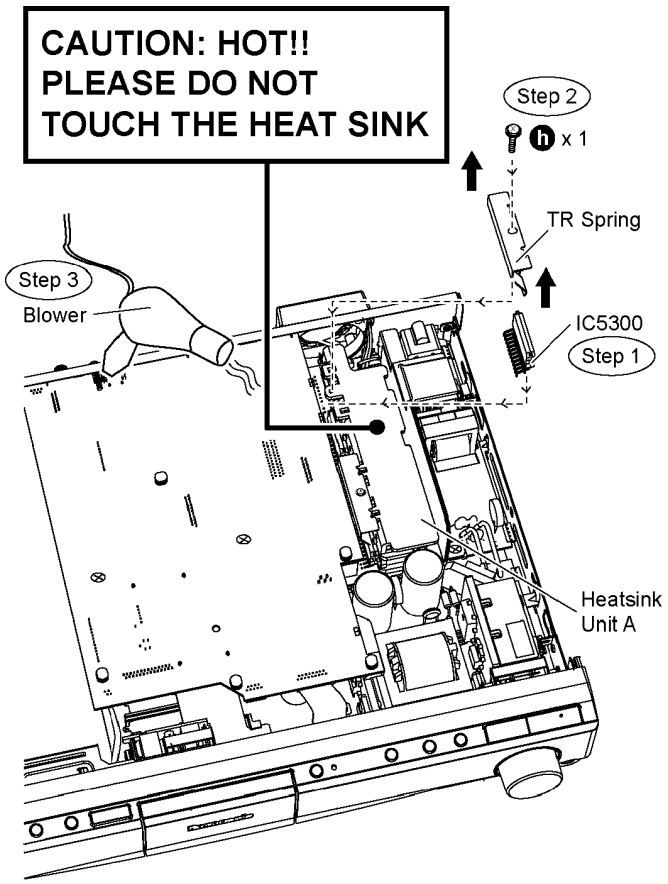
Note: Refer to the diagrams of D-Amp P.C.B. (Item 20.4.) for location of the part.

9.16.1. Assembly of Digital Amp IC (IC5300)

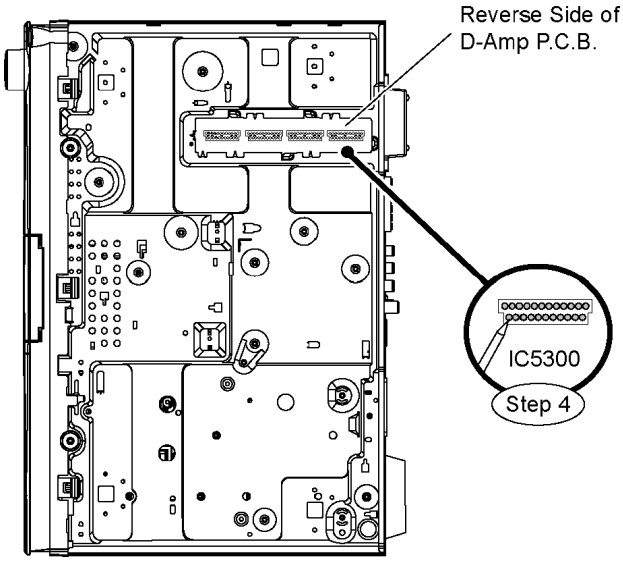
Step 1 Fix the digital amp IC (IC5300) to the heatsink unit A.

Step 2 Screw the TR spring to the heatsink unit A.

Step 3 Use a blower to remove the minute particles that might be caused after the process of the screwing TR spring to the heatsink unit A.



Step 4 Solder pins of the digital amp IC (IC5300) on the reverse side of D-Amp P.C.B.



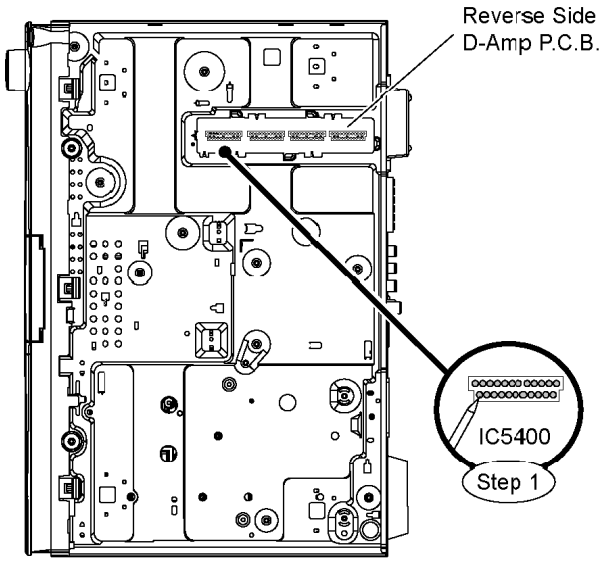
Special Note: Ensure pins of the digital amp IC (IC5300) are properly seated and soldered on D-Amp P.C.B.

Step 5 Follow (Step 5) to (Step 6) of Item 9.15.1.

9.17. Replacement of Digital Amp IC (IC5400)

- Follow (Step 1) to (Step 3) of Item 9.3.
- Follow (Step 1) to (Step 2) of Item 9.16.

Step 1 Desolder pins of the digital amp IC (IC5400) on the reverse side of D-Amp P.C.B.

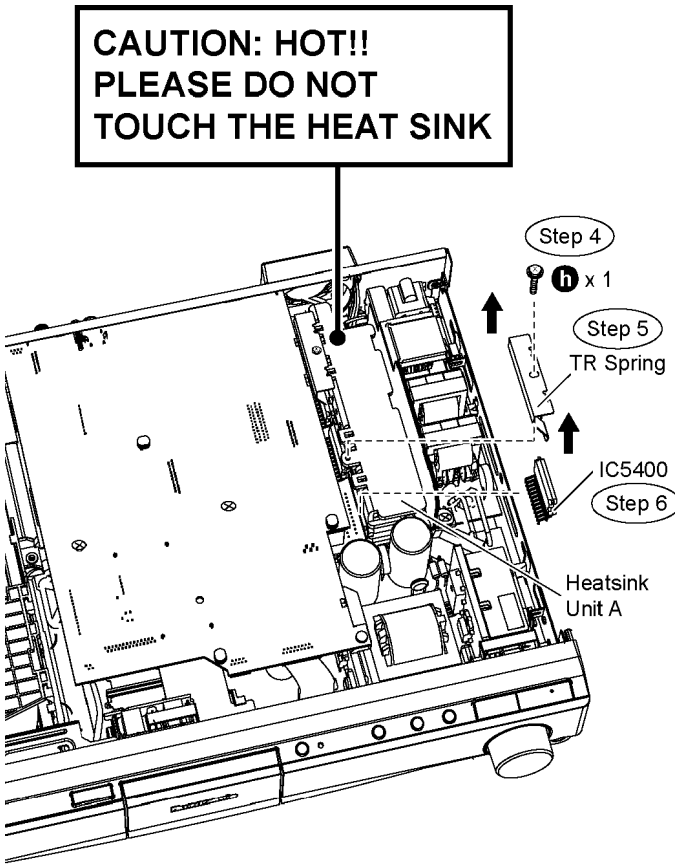


Step 2 Remove 1 screw at the TR spring.

Step 3 Remove the TR spring in the direction of arrows.

Step 4 Remove the digital amp IC (IC5400) from the heatsink unit A.

Caution: Handle the heatsink unit A with caution due to its high temperature after prolonged use. Touching it may lead to injuries.



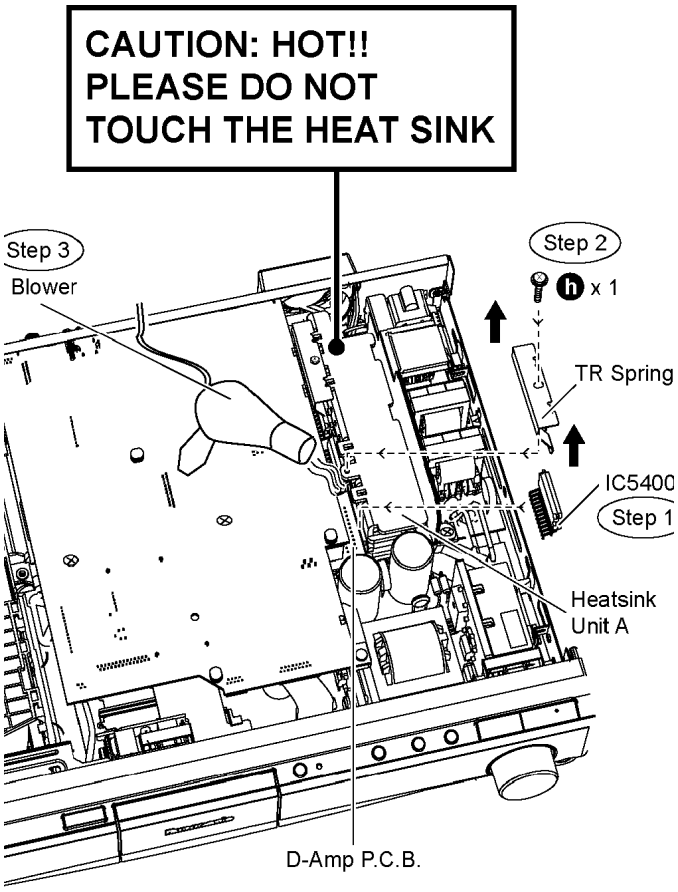
Note: Refer to the diagrams of D-Amp P.C.B. (Item 20.4.) for location of the part.

9.17.1. Assembly of Digital Amp IC (IC5400)

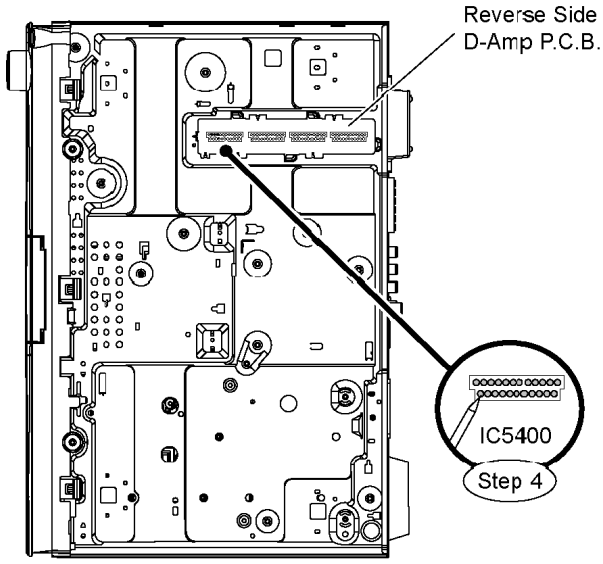
Step 1 Fix the digital amp IC (IC5400) to the heatsink unit A.

Step 2 Screw the TR spring to the heatsink unit A.

Step 3 Use a blower to remove the minute particles that might be caused after the process of the screwing TR spring to the heatsink unit A.



Step 4 Solder pins of the digital amp IC (IC5400) on the reverse side of D-Amp P.C.B.



Special Note: Ensure pins of the digital amp IC (IC5400) are properly seated and soldered on D-Amp P.C.B.

Step 5 Follow (Step 5) to (Step 6) of Item 9.17.1

9.18. Disassembly of SMPS P.C.B.

- Follow (Step 1) to (Step 3) of Item 9.3.
- Follow (Step 1) to (Step 7) of Item 9.12.

Step 1 Move aside Main P.C.B. and position it according to the diagram shown.

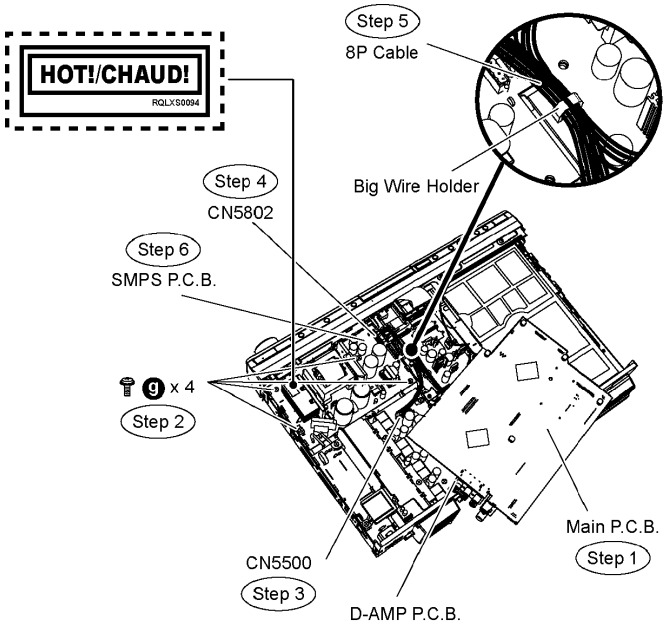
Step 2 Remove 4 screws on SMPS P.C.B.

Step 3 Detach 8P cable at the connector (CN5500) on D-Amp P.C.B.

Step 4 Detach 11P cable at the connector (CN5802) on SMPS P.C.B.

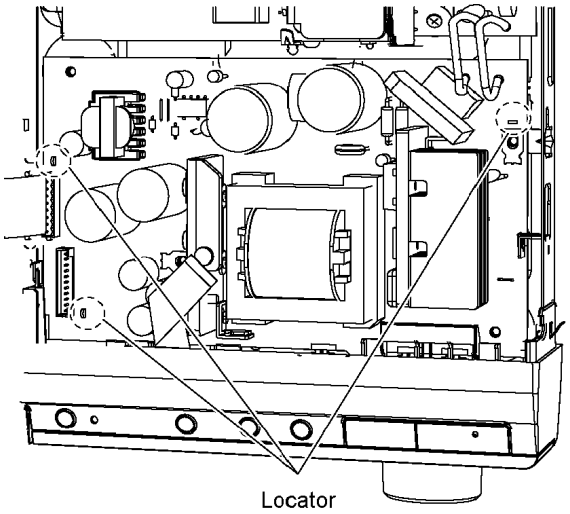
Step 5 Remove 8P cable (SMPS P.C.B. to D-Amp P.C.B.) from the big wire holder.

Step 6 Remove SMPS P.C.B.



Caution: Handle the heatsink unit B with caution due to its high temperature after prolonged use. Touching it may lead to injuries.

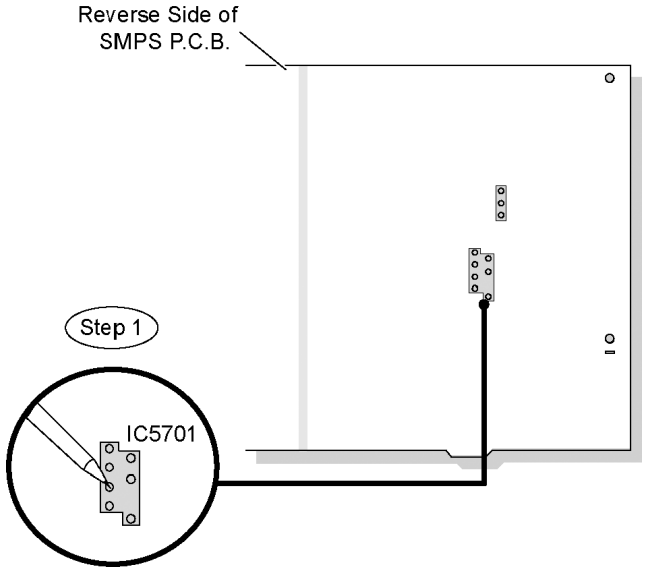
Special Note: During reassembling procedures, ensure the P.C.B. is seated properly at the locators.



9.19. Replacement of Switch Regulator IC (IC5701)

- Follow (Step 1) to (Step 3) of Item 9.3.
- Follow (Step 1) to (Step7) of Item 9.12.
- Follow (Step 1) to (Step 6) of Item 9.17.

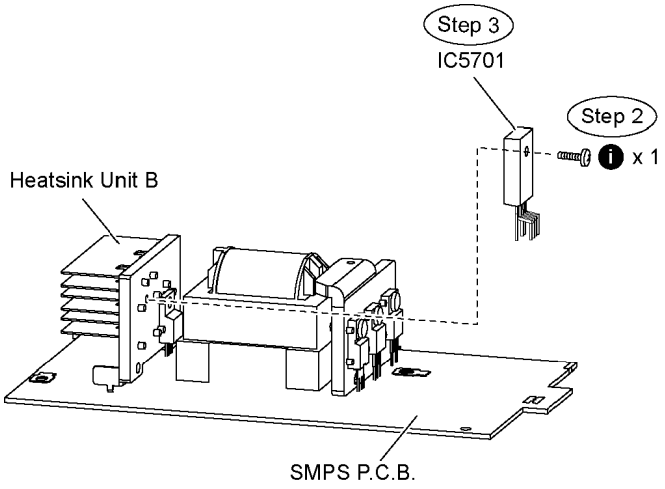
Step 1 Desolder pins of the switch regulator IC (IC5701) on the reverse side of SMPS P.C.B.



Step 2 Remove 1 screw from the switch regulator IC (IC5701).

Step 3 Remove the switch regulator IC (IC5701) from the heatsink unit B.

Caution: Handle the heatsink unit B with caution due to its high temperature after prolonged use. Touching it may lead to injuries.



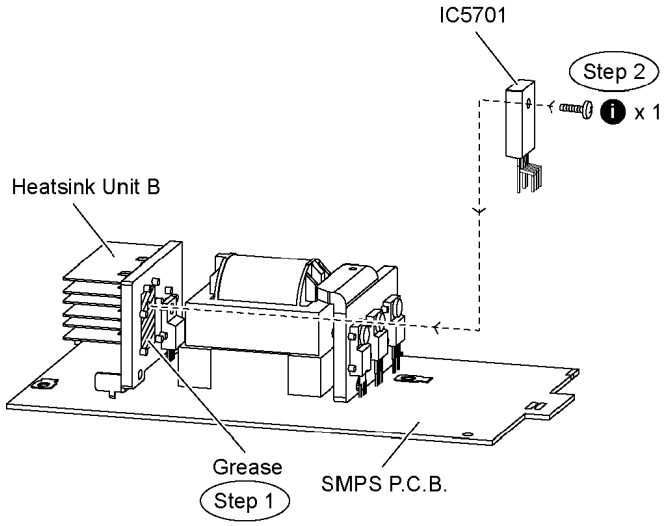
Note : Refer to the diagrams of SMPS P.C.B. (Item 20.5.) for location of the part.

9.19.1. Assembly of Switch Regulator IC (IC5701)

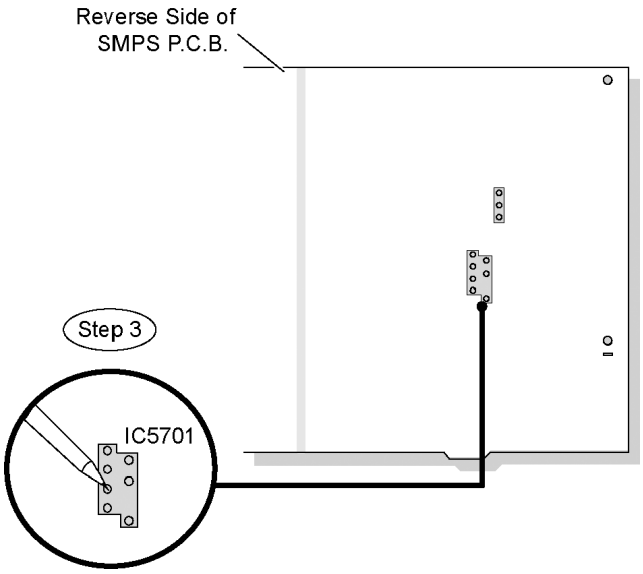
Step 1 Apply grease to the heatsink unit B.

Step 2 Fix and screw the switch regulator IC (IC5701) to the heatsink unit B.

Special Note: Ensure the switch regulator IC (IC5701) is tightly screwed to the heatsink unit B.



Step 3 Solder pins of the switch regulator IC (IC5701) on the reverse side of SMPS P.C.B.



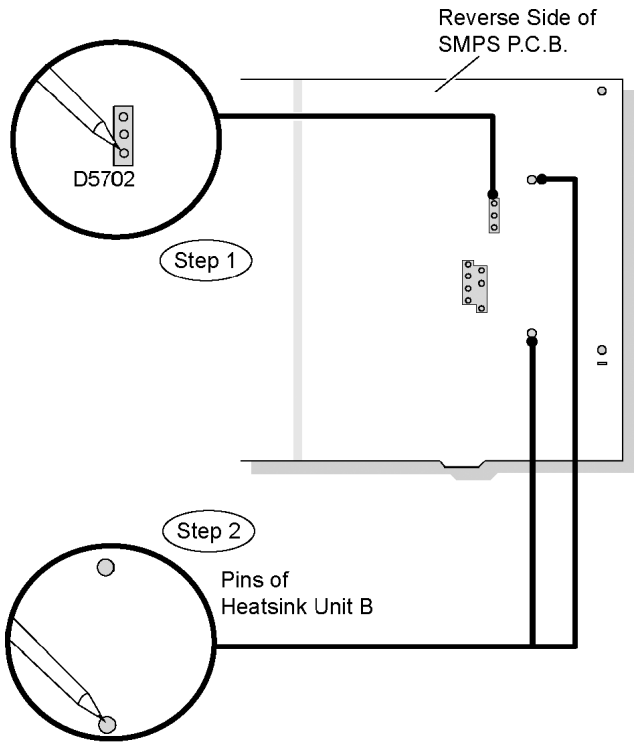
Special Note: Ensure pins of the switch regulator IC (IC5701) are properly seated and soldered on SMPS P.C.B.

9.20. Replacement of Switch Regulator Diode (D5702)

- Follow (Step 1) to (Step 3) of Item 9.3.
- Follow (Step 1) to (Step 7) of Item 9.12.
- Follow (Step 1) to (Step 6) of Item 9.18.

Step 1 Desolder pins of the switch regulator diode (D5702) on the reverse side of SMPS P.C.B.

Step 2 Desolder pins of the heatsink unit B.



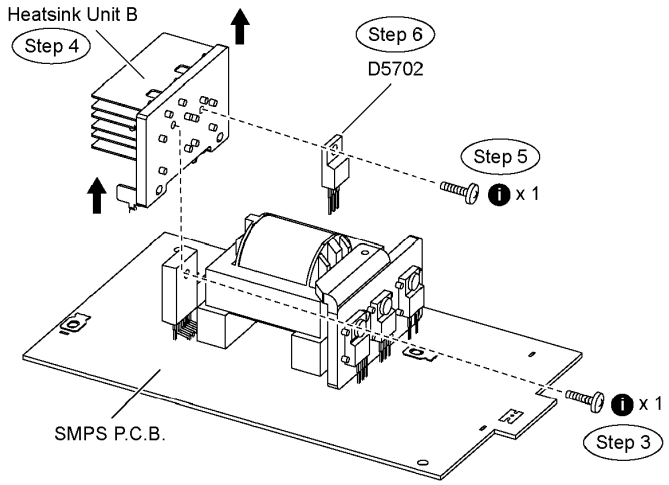
Step 3 Remove 1 screw from the switch regulator IC (IC5701).

Step 4 Remove the heatsink unit B in the direction of arrows.

Step 5 Remove 1 screw from the switch regulator diode. (D5702).

Step 6 Remove the switch regulator diode (D5702) from the heatsink unit B.

Caution: Handle the heatsink unit B with caution due to its high temperature after prolonged use. Touching it may lead to injuries.



Note : Refer to the diagrams of SMPS P.C.B. (Item 20.5.) for location of the part.

9.20.1. Assembly of Switch Regulator Diode (D5702)

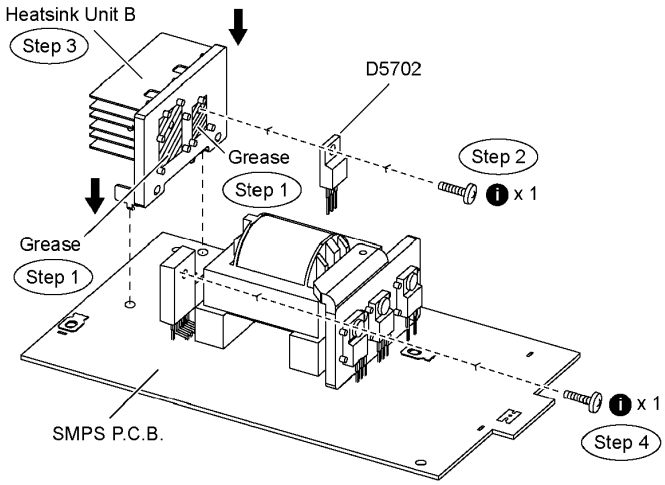
Step 1 Apply grease to the heatsink unit B.

Step 2 Fix and screw the switch regulator diode (D5702) to the heatsink unit B.

Special Note: Ensure the switch regulator diode (D5702) is tightly screwed to the heatsink unit B.

Step 3 Fix the heatsink unit B on SMPS P.C.B. in the direction of arrows.

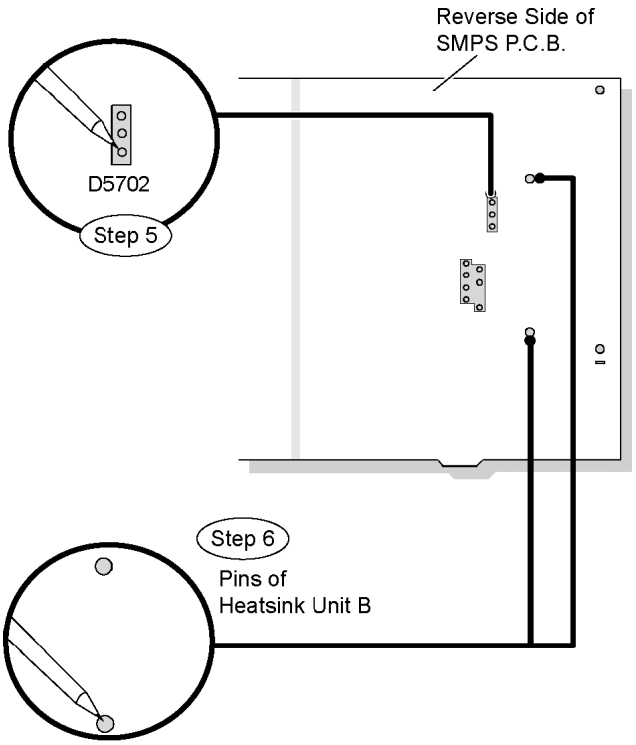
Step 4 Fix and screw the switch regulator IC (IC5701) to the heatsink unit B



Special Note: Ensure the heatsink unit B is properly seated on SMPS P.C.B.

Step 5 Solder pins of the switch regulator diode (D5702) on the reverse side of SMPS P.C.B.

Step 6 Solder pins of the heatsink unit B on the reverse side of SMPS P.C.B.

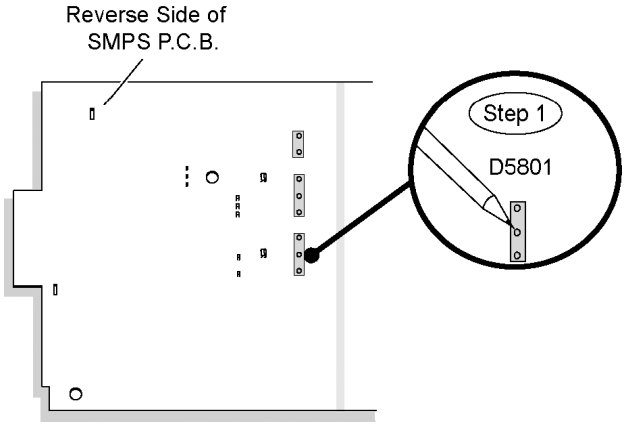


Special Note: Ensure pins of the switch regulator diode (D5702) are properly seated and soldered on SMPS P.C.B.

9.21. Replacement of Regulator Diode (D5801)

- Follow (Step 1) to (Step 3) of Item 9.3.
- Follow (Step 1) to (Step 7) of Item 9.12.
- Follow (Step 1) to (Step 6) of Item 9.18.

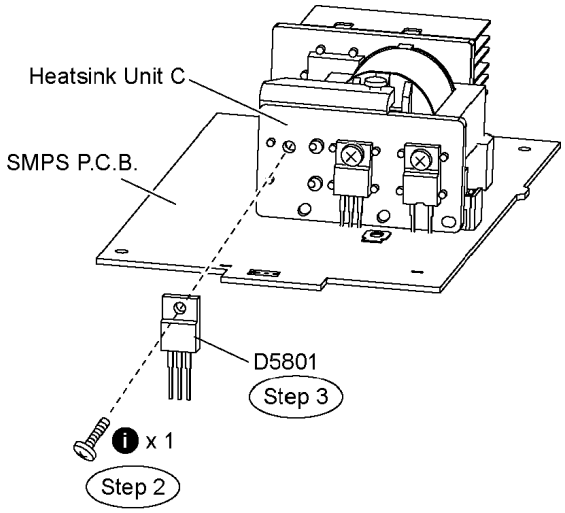
Step 1 Desolder pins of the regulator diode (D5801) on the reverse side of SMPS P.C.B.



Step 2 Remove 1 screw from the regulator diode (D5801).

Step 3 Remove the regulator diode (D5801) from the heatsink unit C.

Caution: Handle the heatsink unit C with caution due to its high temperature after prolonged use. Touching it may lead to injuries.



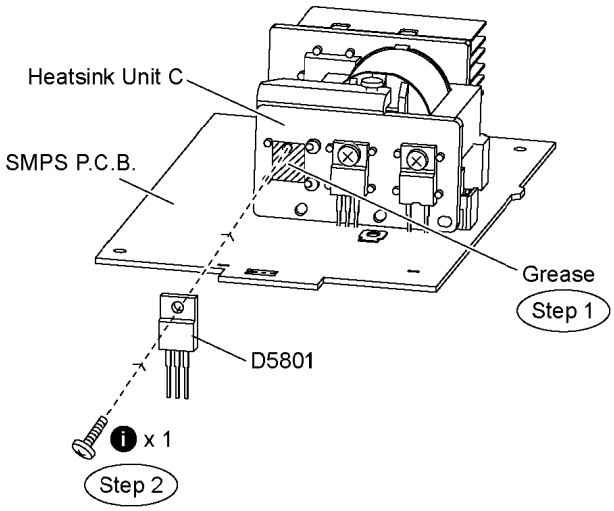
Note: Refer to the diagrams of SMPS P.C.B. (Item 20.5.) for location of the part.

9.21.1. Assembly of Regulator Diode (D5801)

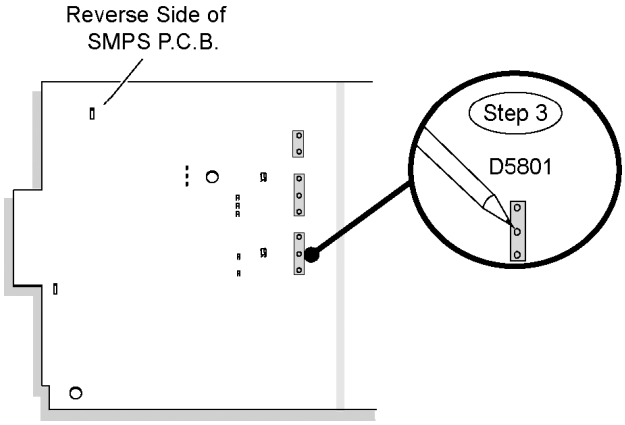
Step 1 Apply grease to the heatsink unit C.

Step 2 Fix and screw the regulator diode (D5801) to the heatsink unit C.

Special Note: Ensure the regulator diode (D5801) is tightly screwed to the heatsink unit C.



Step 3 Solder pins of the regulator diode (D5801) on the reverse side of SMPS P.C.B.

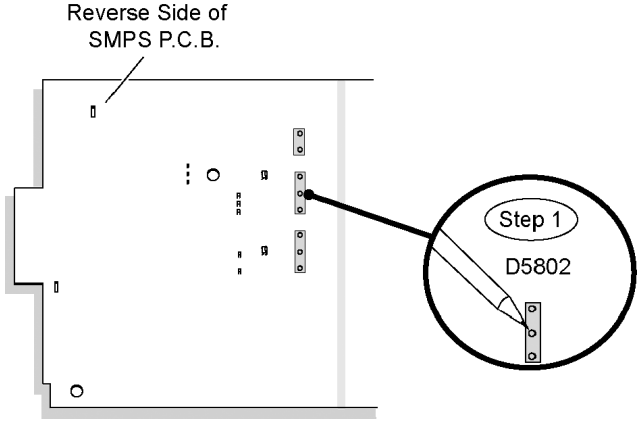


Special Note: Ensure pins of the regulator diode (D5801) are properly seated and soldered on SMPS P.C.B.

9.22. Replacement of Regulator Diode (D5802)

- Follow (Step 1) to (Step 3) of Item 9.3.
- Follow (Step 1) to (Step 7) of Item 9.12.
- Follow (Step 1) to (Step 6) of Item 9.18.

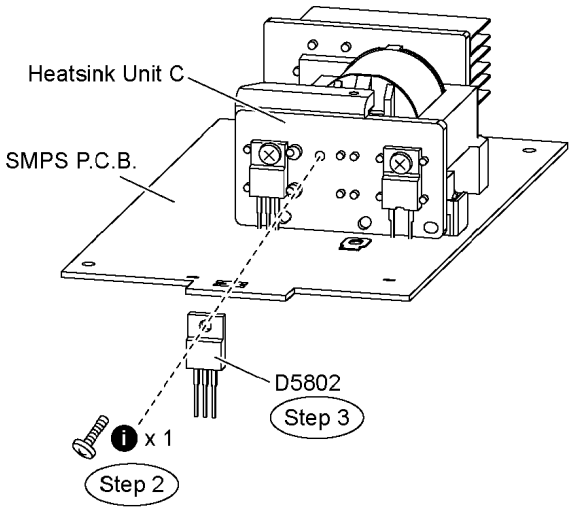
Step 1 Desolder pins of the regulator diode (D5802) on the reverse side of SMPS P.C.B.



Step 2 Remove 1 screw from the regulator diode (D5802).

Step 3 Remove the regulator diode (D5802) from the heatsink unit C.

Caution: Handle the heatsink unit C with caution due to its high temperature after prolonged use. Touching it may lead to injuries.



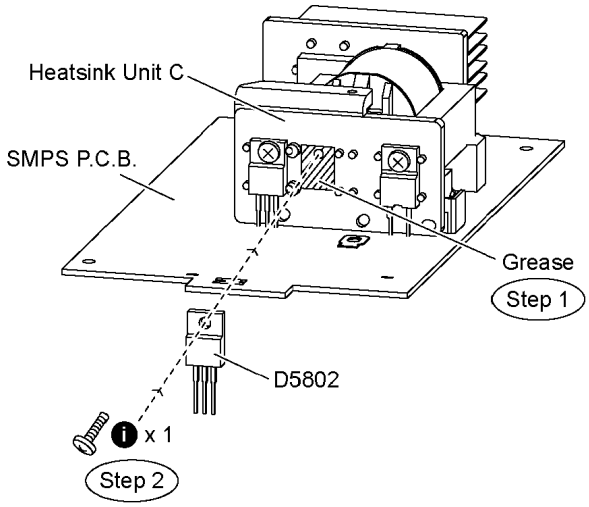
Note: Refer to the diagrams of SMPS P.C.B. (Item 20.5) for location of the part.

9.22.1. Assembly of Regulator Diode (D5802)

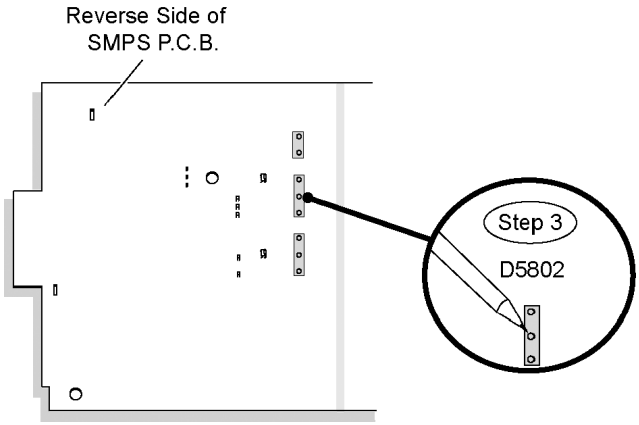
Step 1 Apply grease to the heatsink unit C.

Step 2 Fix and screw the regulator diode (D5802) to the heatsink unit C.

Special Note: Ensure the regulator diode (D5802) is tightly screwed to the heatsink unit C.



Step 3 Solder pins of the regulator diode (D5802) on the reverse side of SMPS P.C.B.

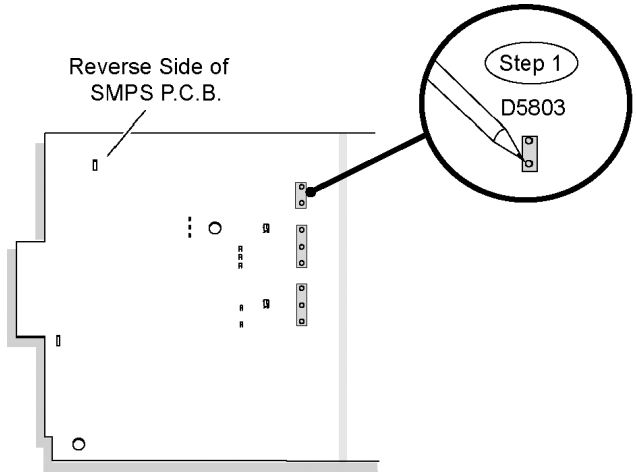


Special Note: Ensure pins of the regulator diode (D5802) are properly seated and soldered on SMPS P.C.B.

9.23. Replacement of Regulator Diode (D5803)

- Follow (Step 1) to (Step 3) of Item 9.3.
- Follow (Step 1) to (Step 7) of Item 9.12.
- Follow (Step 1) to (Step 6) of Item 9.18.

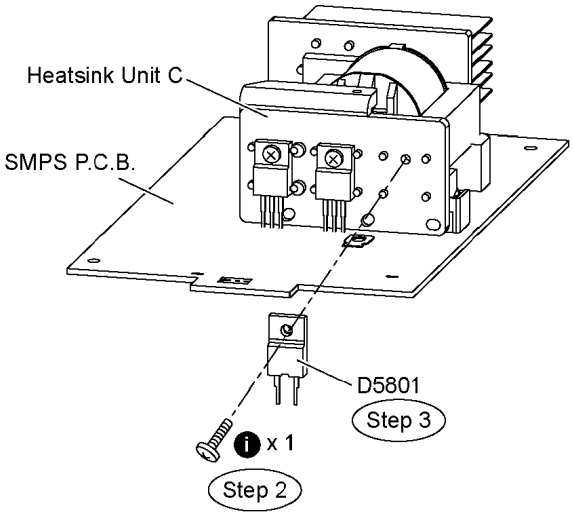
Step 1 Desolder pins of the regulator diode (D5803) on the reverse side of SMPS P.C.B.



Step 2 Remove 1 screw from the regulator diode (D5803).

Step 3 Remove the regulator diode (D5803) from the heatsink unit C.

Caution: Handle the heatsink unit C with caution due to its high temperature after prolonged use. Touching it may lead to injuries.



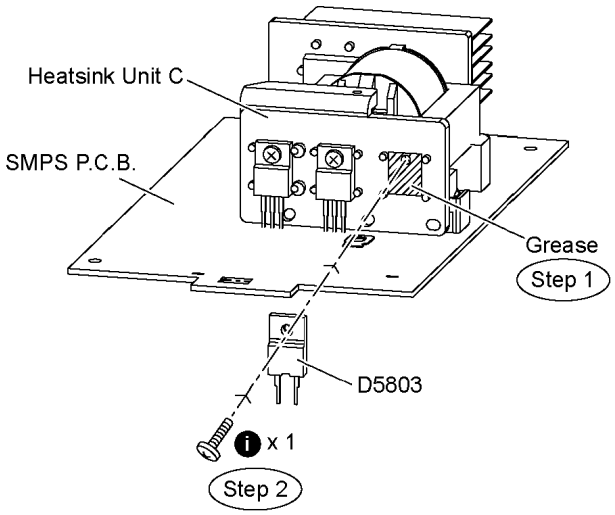
Note: Refer to the diagrams of SMPS P.C.B. (Item 20.5) for location of the part.

9.23.1. Assembly of Regulator Diode (D5803)

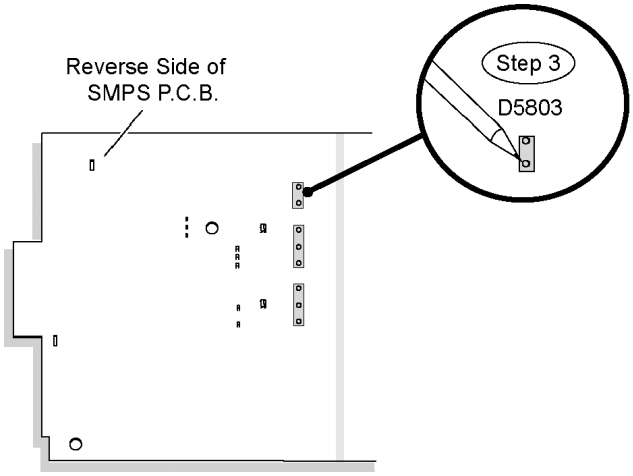
Step 1 Apply grease to the heatsink unit C.

Step 2 Fix and screw the regulator diode (D5803) to the heatsink unit C.

Special Note: Ensure the regulator diode (D5803) is tightly screwed to the heatsink unit C.



Step 3 Solder pins of the regulator diode (D5803) on the reverse side of SMPS P.C.B.



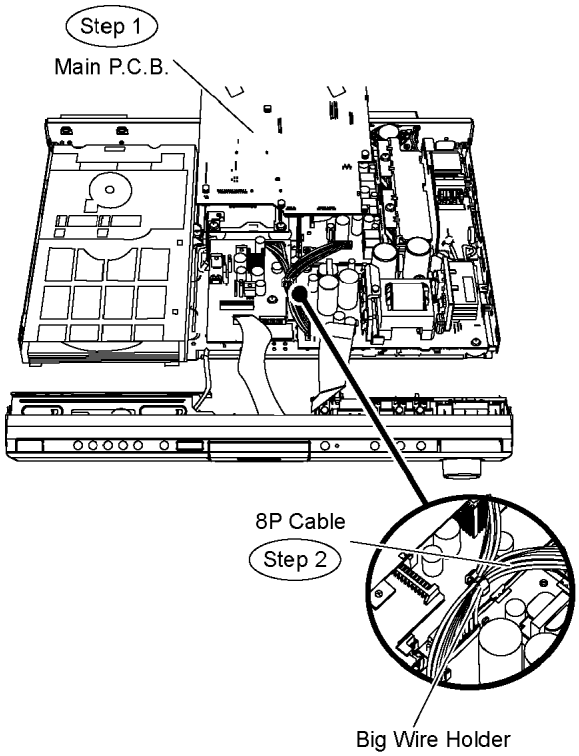
Special Note: Ensure pins of the regulator diode (D5803) are properly seated and soldered on SMPS P.C.B.

9.24. Disassembly of Power Supply P.C.B.

- Follow (Step 1) to (Step 3) of Item 9.3.
- Follow (Step 1) to (Step 5) of Item 9.6.
- Follow (Step 1) to (Step 8) of Item 9.12.

Step 1 Move aside Main P.C.B. and position it according to the diagram shown.

Step 2 Remove 8P cable (SMPS P.C.B. to D-Amp P.C.B.) from the big wire holder.



Step 3 Remove 2 screws on Power Supply P.C.B.

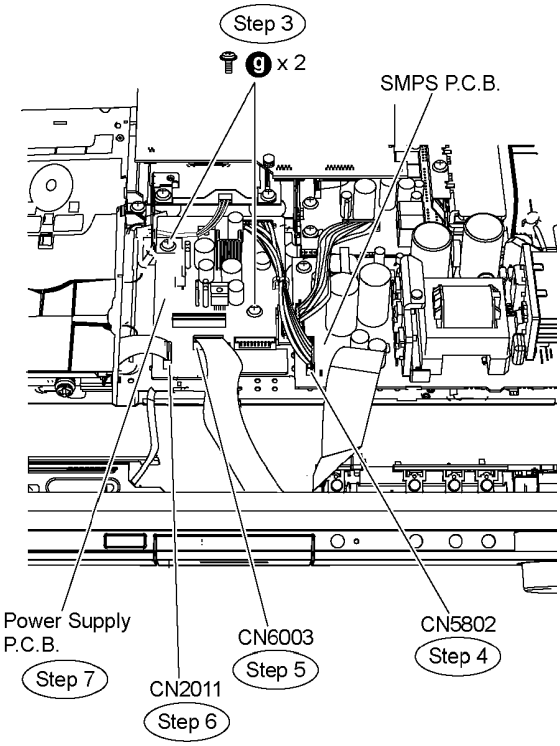
Step 4 Detach 11P cable at the connector (CN5802) on SMPS P.C.B.

Step 5 Detach 14P FFC cable at the connector (CN6003) on the Power Supply P.C.B.

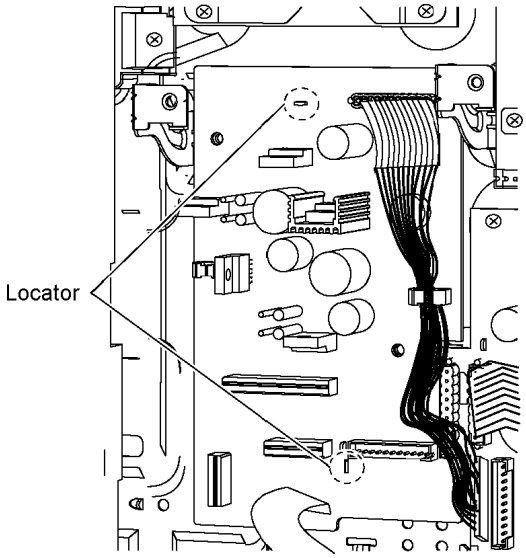
Step 6 Detach 11P FFC cable at the connector (CN2011) on

the Power Supply P.C.B.

Step 7 Remove Power Supply P.C.B.



Special Note: During reassembling procedures, ensure the P.C.B. is seated properly at the locators.

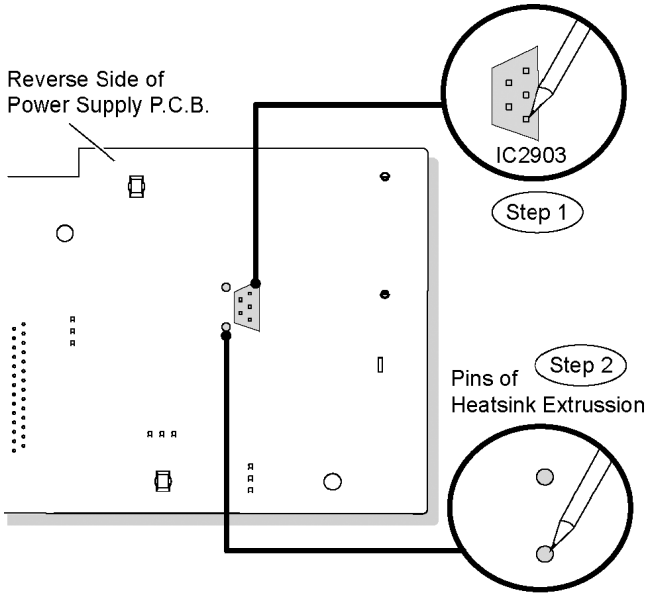


9.25. Replacement of Regulator IC (IC2903)

- Follow (Step 1) to (Step 3) of Item 9.3.
- Follow (Step 1) to (Step 5) of Item 9.6.
- Follow (Step 1) to (Step 7) of Item 9.12.
- Follow (Step 1) to (Step 7) of Item 9.24.

Step 1 Desolder pins of the regulator IC (IC2903) on the reverse side of Power Supply P.C.B.

Step 2 Desolder pins of the heatsink extrussion.

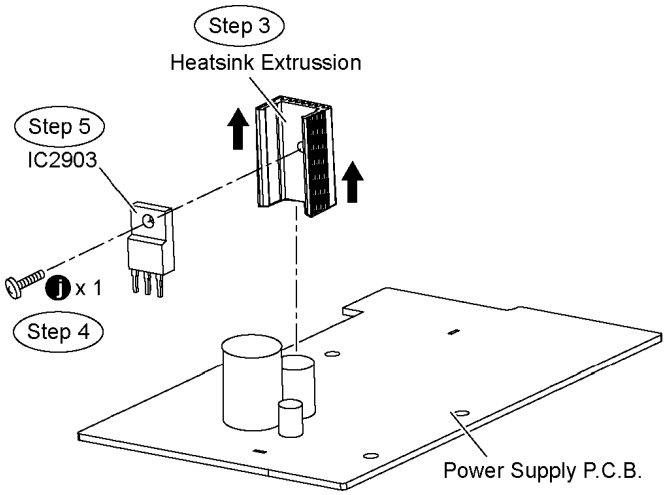


Step 3 Remove the heatsink extrussion in the direction of arrows.

Step 4 Remove 1 screw from the regulator IC (IC2903).

Step 5 Remove the regulator IC (IC2903) from the heatsink extrussion.

Caution: Handle the heatsink extrussion with caution due to its high temperature after prolonged use. Touching it may lead to injuries.



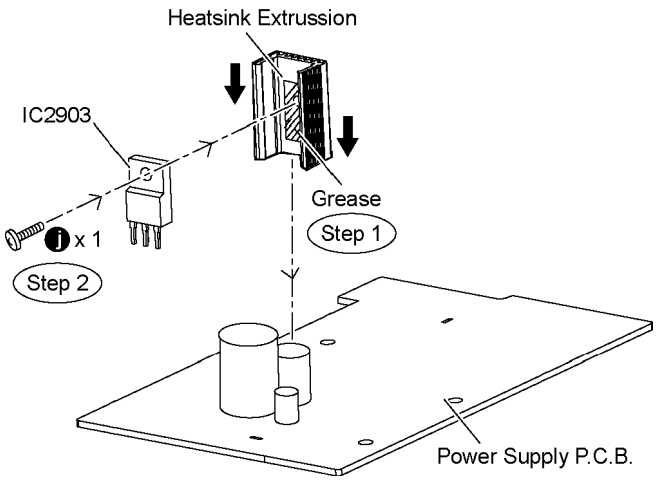
Note: Refer to the diagrams of Power Supply P.C.B. (Item 20.3.) for location of the part.

9.25.1. Assembly of Regulator IC (IC2903)

Step 1 Apply grease to the heatsink extrussion.

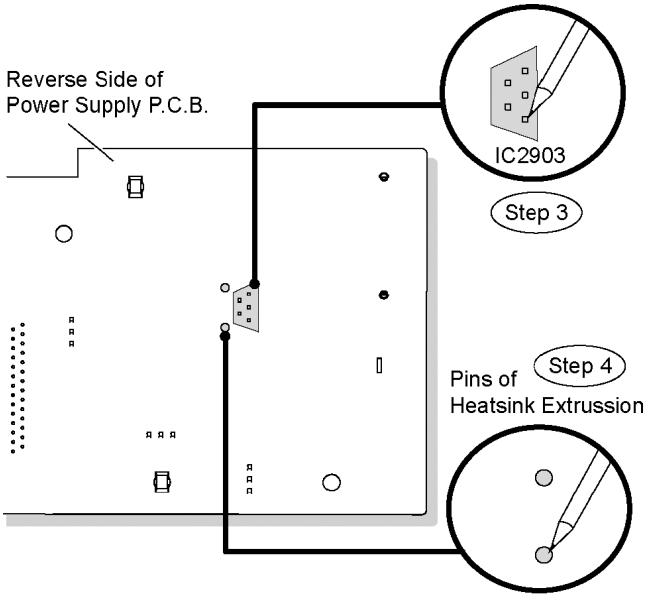
Step 2 Fix and screw the regulator IC (IC2903) to the heatsink extrussion.

Special Note: Ensure the regulator IC (IC2903) is tighly screwed to the heatsink extrussion.



Step 3 Solder pins of the regulator IC (IC2903) on the reverse side of Power Supply P.C.B.

Step 4 Solder pins of the hestsink extrussion on the reverse side of Power Supply P.C.B.

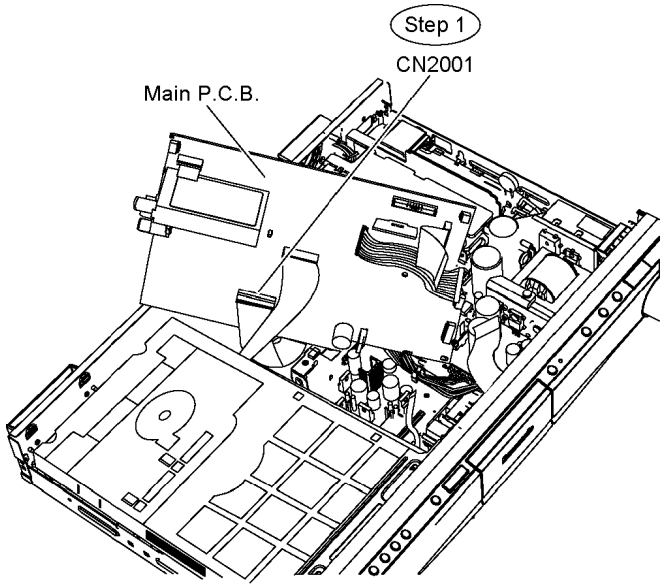


Special Note: Ensure pins of the regulator IC (IC2903) are properly seated and soldered on Power Supply P.C.B.

9.26. Disassembly of DVD Module P.C.B.

- Follow (Step 1) to (Step 3) of Item 9.3.
- Follow (Step 1) to (Step 9) of Item 9.12.

Step 1 Detach 50P FFC cable at the connector (CN2001) on Main P.C.B.

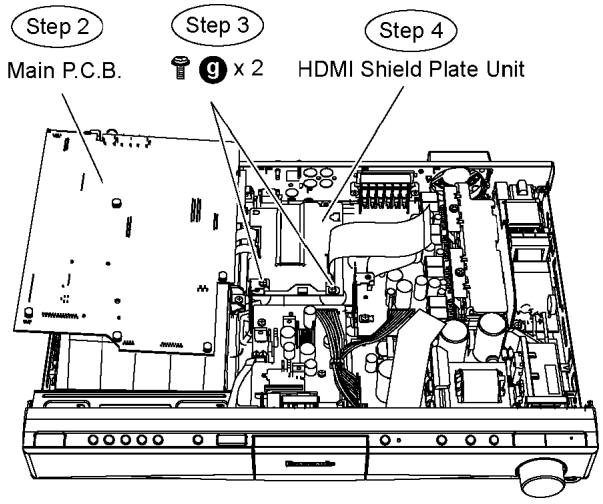


Step 2 Move aside Main P.C.B. and position it according to the diagram shown.

- Disassembly at HDMI Shield Plate Unit

Step 3 Remove 2 screws from the HDMI shield plate unit.

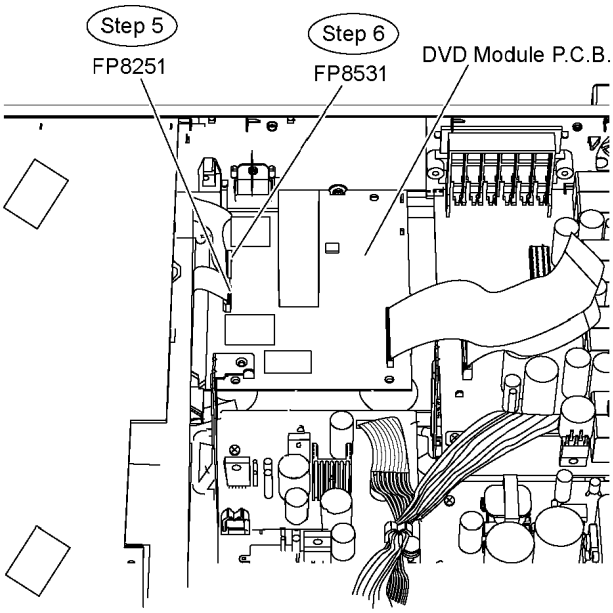
Step 4 Remove the HDMI shield plate unit.



Caution Note: Keep the HDMI shield plate unit in safe place. Avoid denting it. Place it back during assembling.

Step 5 Detach 7P cable at the connector (FP8251) on DVD Module P.C.B.

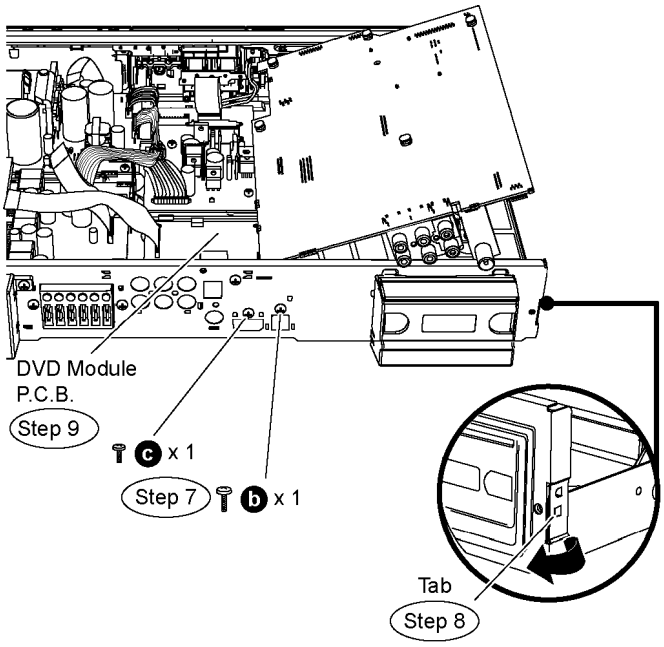
Step 6 Detach 26P cable at the connector (FP8531) on DVD Module P.C.B.



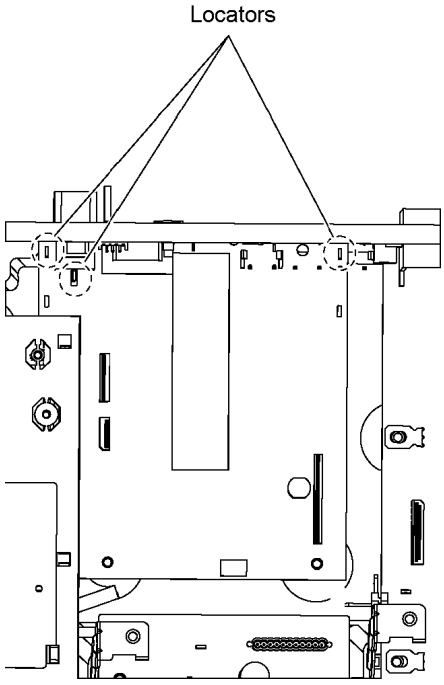
Step 7 Remove 2 screws at the rear panel.

Step 8 Release the tab of the rear panel in the direction of arrow.

Step 9 Remove DVD Module P.C.B.



Special Note: During reassembling procedures, ensure the P.C.B. is seated properly at the locators.

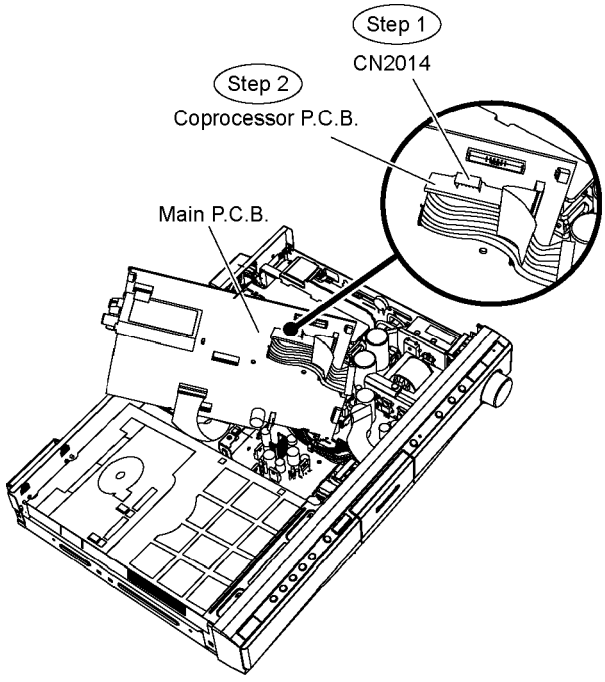


9.27. Disassembly of Coprocessor P.C.B.

- Follow (Step 1) to (Step 3) of Item 9.3.
- Follow (Step 1) to (Step 8) of Item 9.12.

Step 1 Detach Coprocessor P.C.B. at the connector (CN2014) on Main P.C.B.

Step 2 Remove Coprocessor P.C.B.

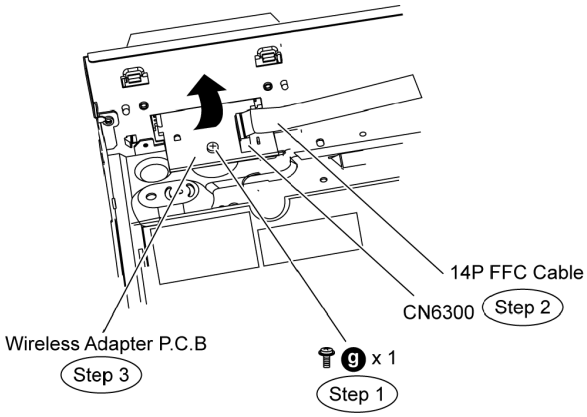


9.28. Disassembly of Wireless Adapter P.C.B.

Step 1 Remove 1 screw on Wireless Adapter P.C.B.

Step 2 Detach 14P FFC cable at the connector (CN6300) on wireless Adapter P.C.B.

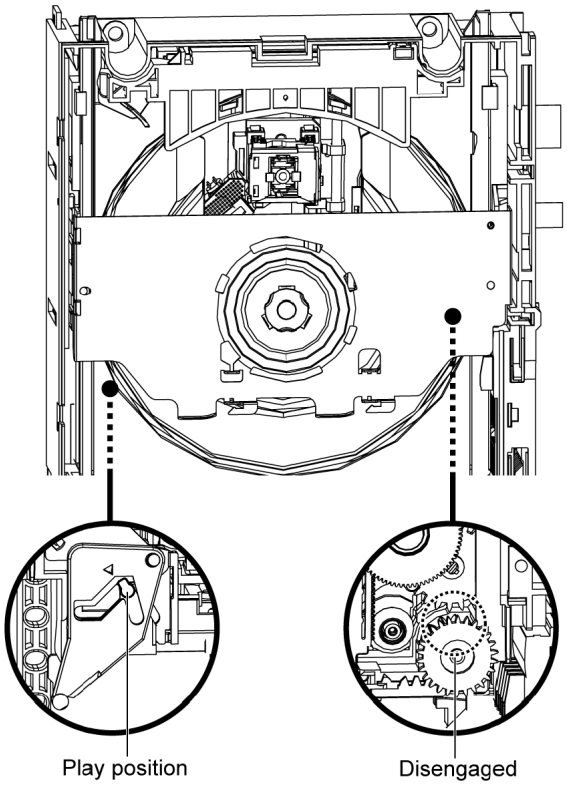
Step 3 Remove the Wireless Adapter P.C.B. in the direction of arrow



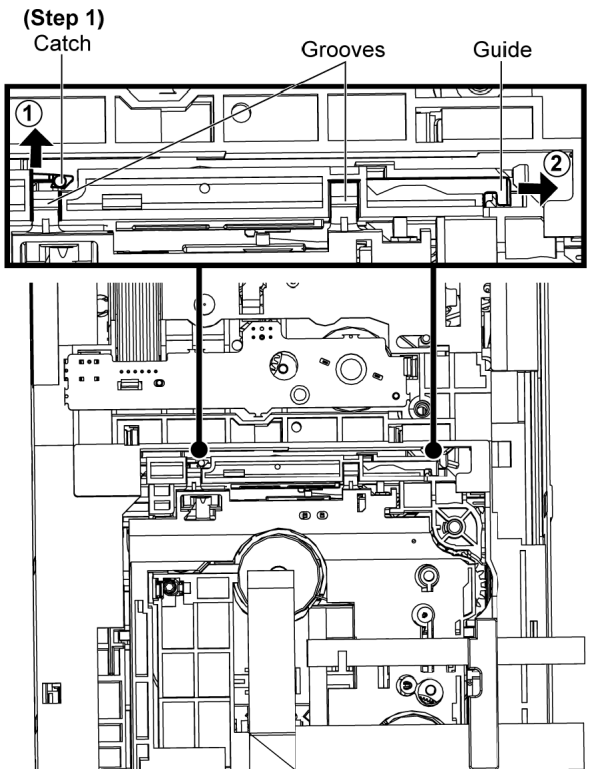
10 Assembling and Disassembling of DVD Mechanism Unit

10.1. Disassembling of TRV unit

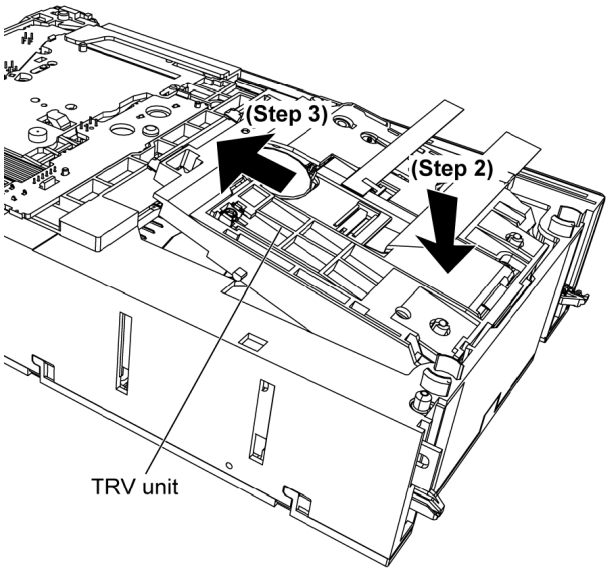
- **Disassembly of TRV unit in play position**



Note: The above picture shows the unit is in play position.



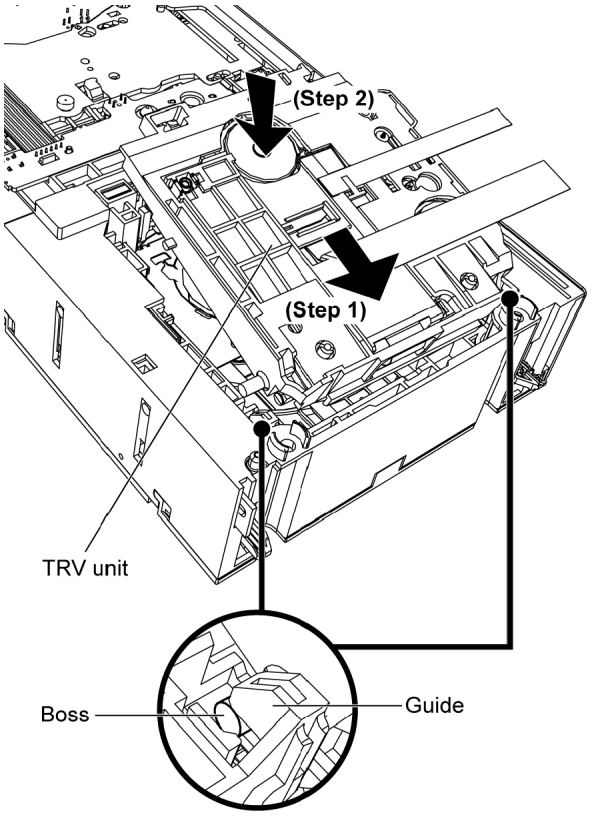
Step 1: Release the catch and push the guide as arrows shown to open both grooves.



Step 2: Press down the TRV unit.

Step 3: Remove the TRV unit as arrow shown.

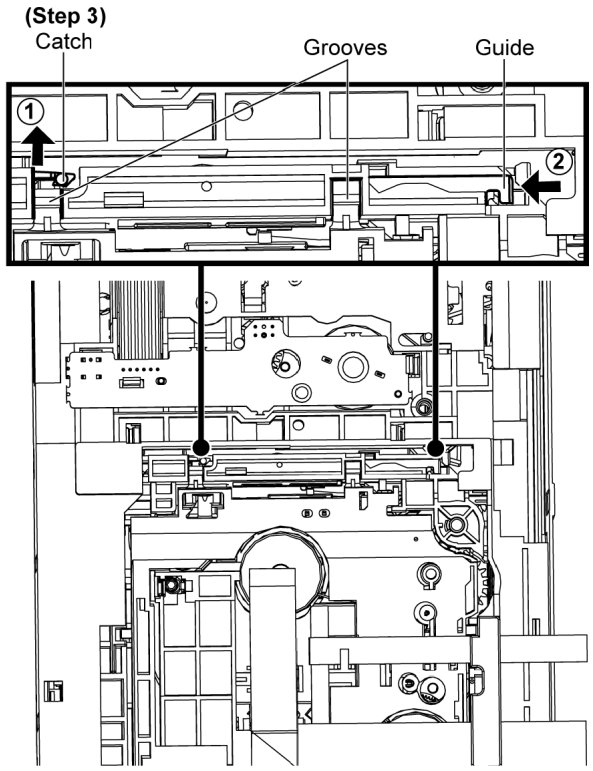
10.2. Assembly of TRV unit



Step 1: Slot the TRV unit into the guides as arrow shown.

Note: Ensure the bosses fix exactly onto the guides.

Step 2: Place down the TRV unit.



Step 3: Release the catch and push the guide as arrows shown to close both grooves.

11 Service Fixture and Tools

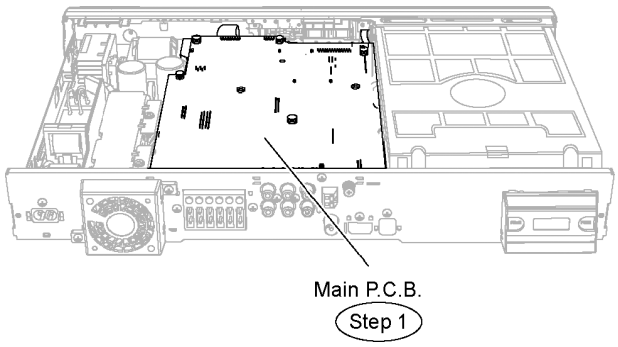
Prepare service tools before proccess service position.

Service Tools		Remarks
D-Amp P.C.B. (CN5500) - SMPS P.C.B. (H5801)	REXX0651 (8 P cable)	[M](RTL)
Main P.C.B. (CN2009) - D-Amp P.C.B. (CN5050)	REEX0815 (17 P cable)	[M](RTL)
Main P.C.B. (CN2015) - Power Supply P.C.B. (CN2016)	REXX0653-J (13 P cable)	[M](RTL)

12 Service Position

12.1. Checking & Repairing Main P.C.B.

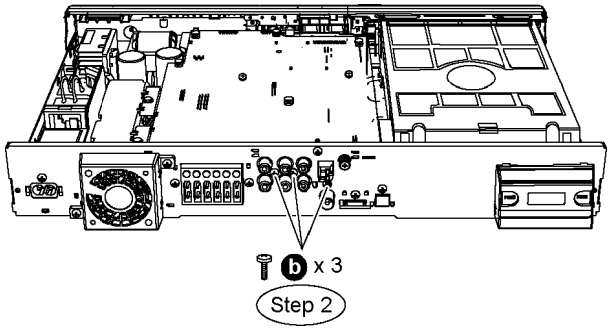
Step 1 Remove the top cabinet to service Main P.C.B.



12.2. Checking & Repairing D-Amp P.C.B.

Step 1 Remove the top cabinet.

Step 2 Remove 3 screws at the rear panel.



Step 3 Remove 2 screws on Main P.C.B.

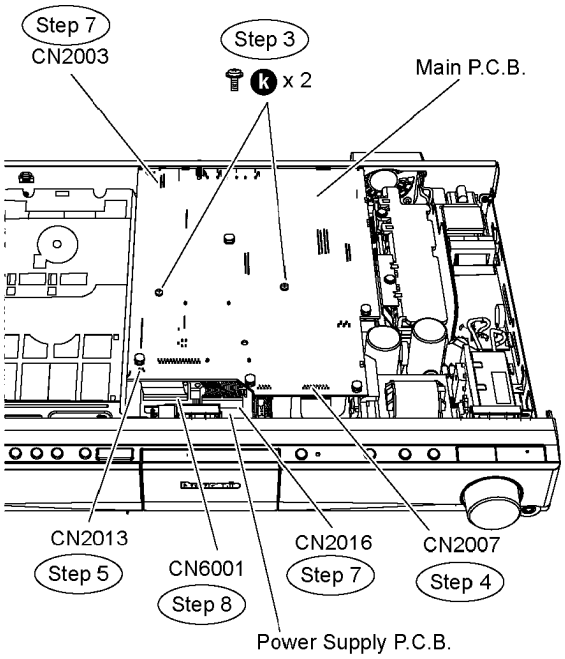
Step 4 Detach 17P cable at the connector (CN2007) on Main P.C.B.

Step 5 Detach 4P cable at the connector (CN2013) on Main P.C.B.

Step 6 Detach 14P cable at the connector (CN2003) on Main P.C.B.

Step 7 Detach 13P cable at the connector (CN2016) on Power Supply P.C.B.

Step 8 Detach 28P cable at the connector (CN6001) on Power Supply P.C.B.

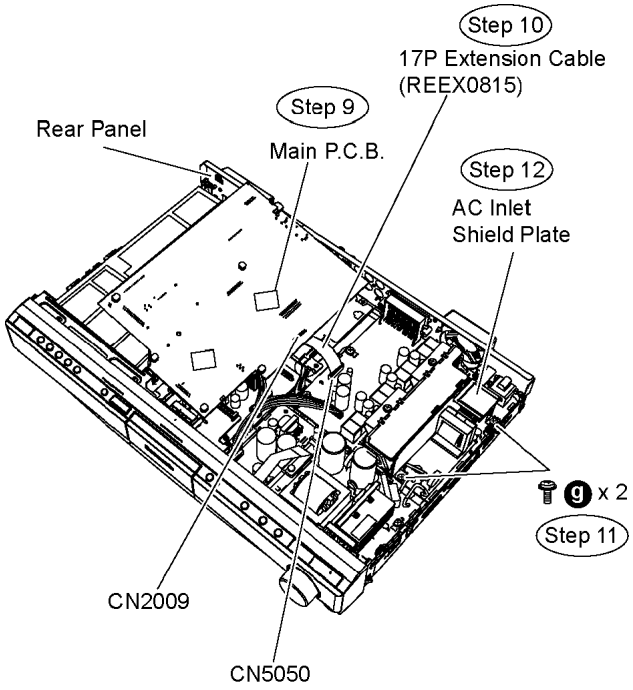


Step 9 Detach Main P.C.B. from the rear panel and position it according to the diagram show.

Step 10 Attach original cable with extension cable REEX0815 (17P cable from CN2009 to CN5050).

Step 11 Remove 2 screws from AC Inlet shield plate unit.

Step 12 Remove the AC Inlet shield plate unit.

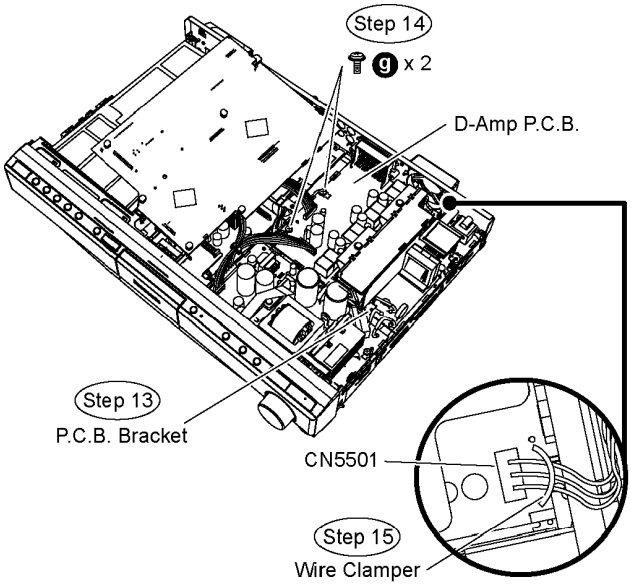


Step 13 Remove the P.C.B. bracket.

Caution Note: Keep the P.C.B. bracket in safe place. Avoid denting it. Place it back during assembling.

Step 14 Remove 2 screws on D-Amp P.C.B.

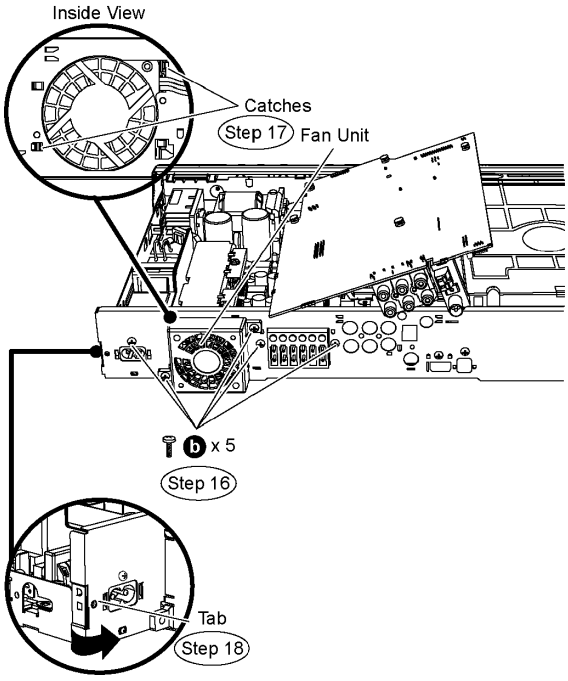
Step 15 Remove the wire clamper to detach 3P cable at the connector (CN5501) on D-Amp P.C.B.



Step 16 Remove 5 screws at the rear panel.

Step 17 Release the catches and remove the fan unit.

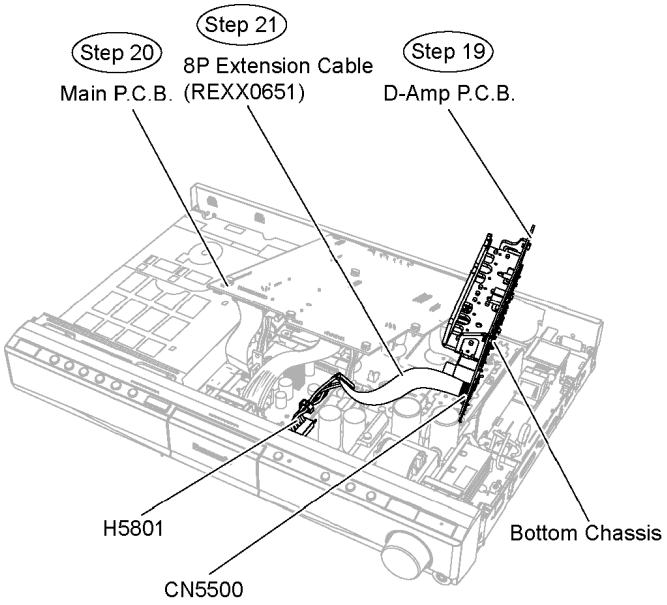
Step 18 Release the tab of the rear panel in the direction of arrow.



Step 19 Detach D-Amp P.C.B. from the bottom chassis and flip it vertically.

Step 20 Position Main P.C.B. according to the diagram shown.

Step 21 Attach original cable with extension cable REXX0651. (8P cable from H5801 to CN5500).



Caution Note: Ensure the cable is attached properly.

Step 22 Connect 13P cable at the connector (CN2016) on Power Supply P.C.B.

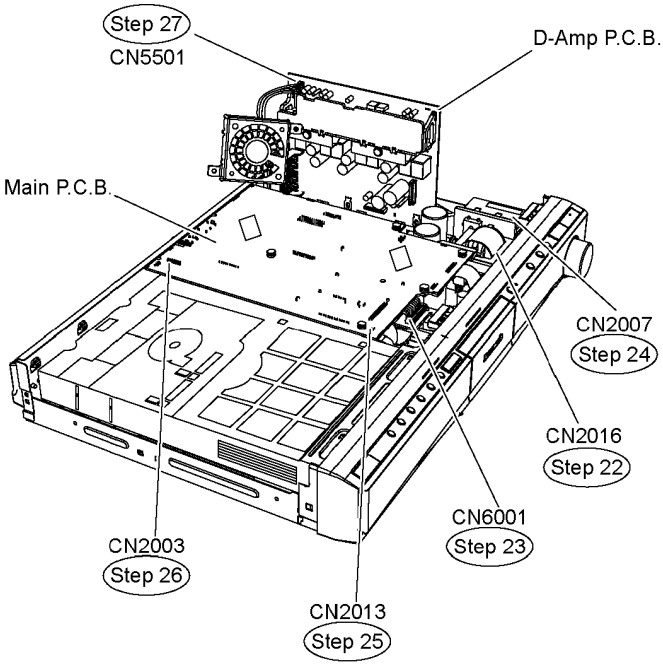
Step 23 Connect 28P cable at the connector (CN6001) on Power Supply P.C.B.

Step 24 Connect 17P cable at the connector (CN2007) on Main P.C.B.

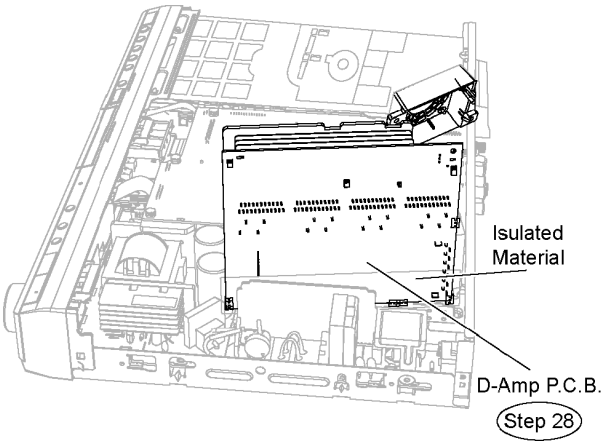
Step 25 Connect 4P cable at the connector (CN2013) on Main P.C.B.

Step 26 Connect the 14P cable at the connector (CN2003) on Main P.C.B.

Step 27 Connect the fan unit at the connector (CN5501) on D-Amp P.C.B.



Step 28 Position D-Amp P.C.B. with insulated material according to the diagram shown.



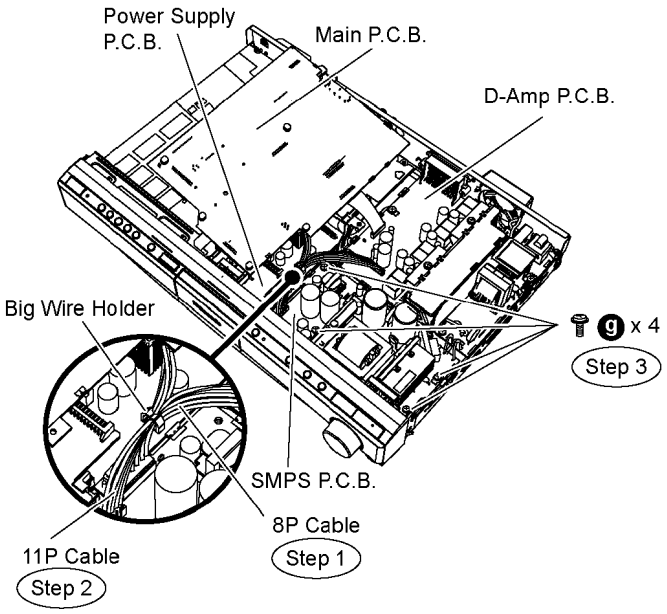
12.3. Checking & Repairing SMPS P.C.B.

- Follow (Step 1) to (Step 9) of Item 12.2.

Step 1 Remove the 8P cable (SMPS P.C.B. to D-Amp P.C.B.) from the big wire holder.

Step 2 Remove the 11P cable (SMPS P.C.B. to Power Supply P.C.B.) from the big wire holder.

Step 3 Remove 4 screws on SMPS P.C.B.



Step 4 Detach SMPS P.C.B. from the bottom chassis and flip it vertically.

Step 5 Position Main P.C.B. according to the diagram shown.

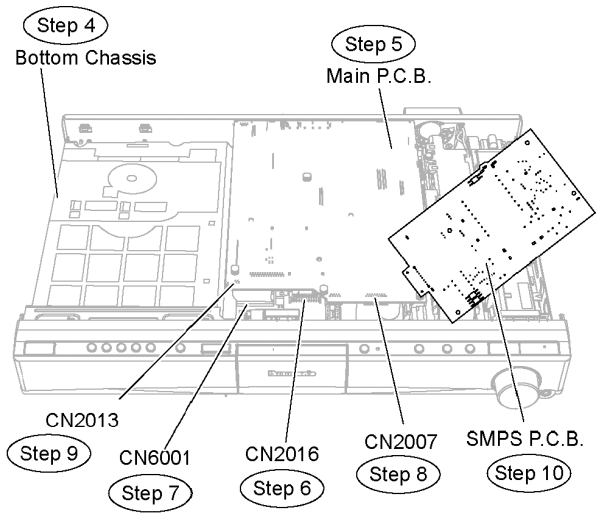
Step 6 Connect 13P cable at the connector (CN2016) on Power Supply P.C.B.

Step 7 Connect 28P cable at the connector (CN6001) on Power Supply P.C.B.

Step 8 Connect 17P cable at the connector (CN2007) on Main P.C.B.

Step 9 Connect 4P cable at the connector (CN2013) on Main P.C.B.

Step 10 Position SMPS P.C.B. according to the diagram shown.



12.4. Checking & Repairing Power Supply P.C.B.

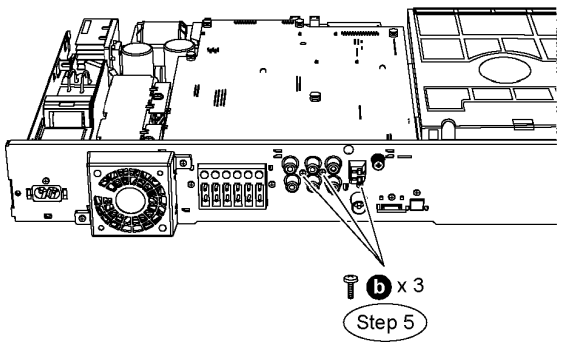
Step 1 Remove the top cabinet.

Step 2 Remove the front panel.

Step 3 Remove Panel P.C.B.

Step 4 Remove Power Button P.C.B.

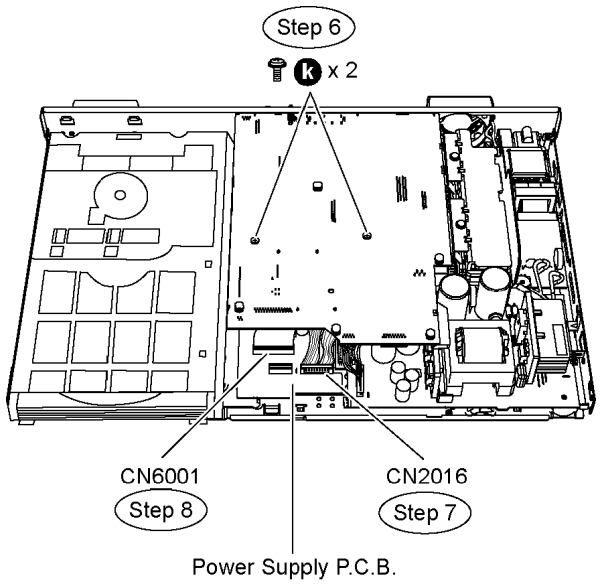
Step 5 Remove 2 screws at rear panel.



Step 6 Remove 2 screws on Main P.C.B.

Step 7 Detach 13P cable at the connector (CN2016) on Power Supply P.C.B.

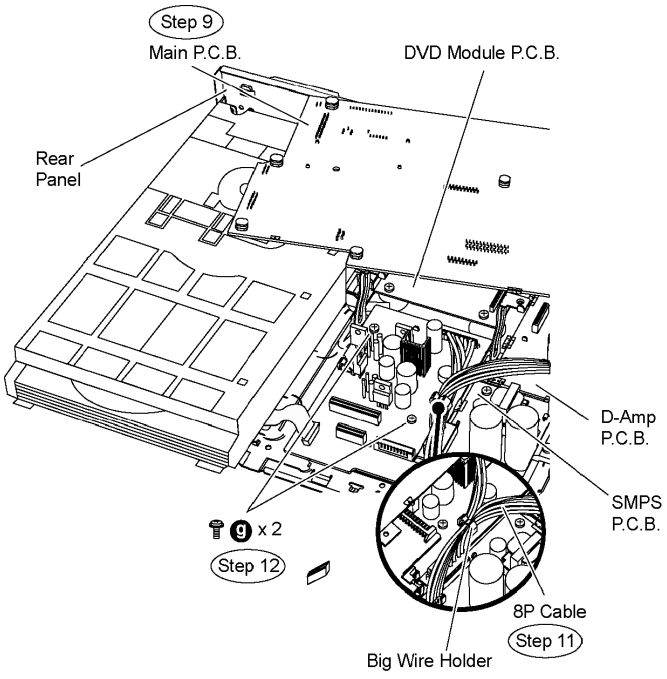
Step 8 Detach 28P cable at the connector (CN6001) on Power Supply P.C.B.



Step 9 Detach Main P.C.B. from the rear panel and position it according to the diagram shown.

Step 10 Remove 8P cable (SMPS P.C.B. to D-Amp P.C.B.) from the wire clamp.

Step 11 Remove 2 screws on Power Supply P.C.B.



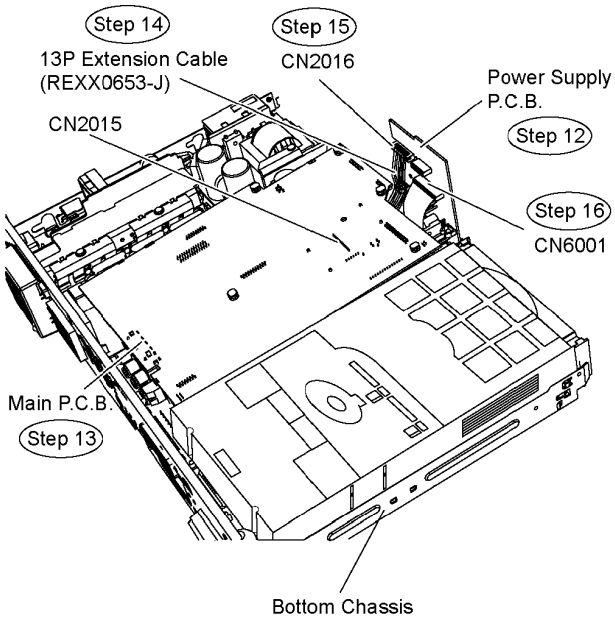
Step 12 Detach Power Supply P.C.B. from the bottom chassis and flip it vertically.

Step 13 Position Main P.C.B. according to the diagram shown.

Step 14 Attach original cable with extension cable REXX0653-J (13P cable from CN2015 to CN2016)

Step 15 Connect 13P cable at the connector (CN2016) on Power Supply P.C.B.

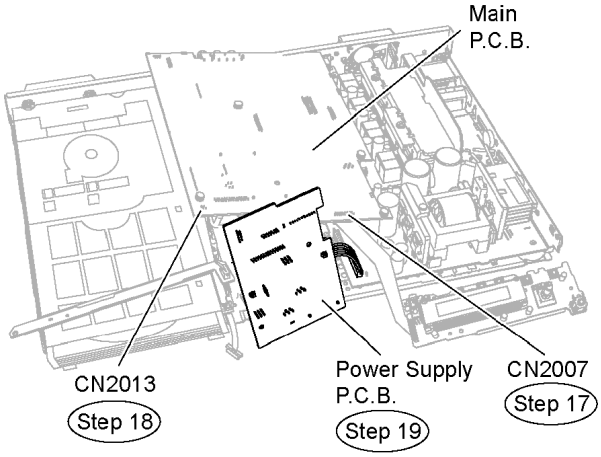
Step 16 Connect 28P cable at the connector (CN6001) on Power Supply P.C.B.



Step 17 Connect 17P cable at the connector (CN2007) on Main P.C.B.

Step 18 Connect 4P cable at the connector (CN2013) on Main P.C.B.

Step 19 Position Power Supply P.C.B. according to the diagram shown.



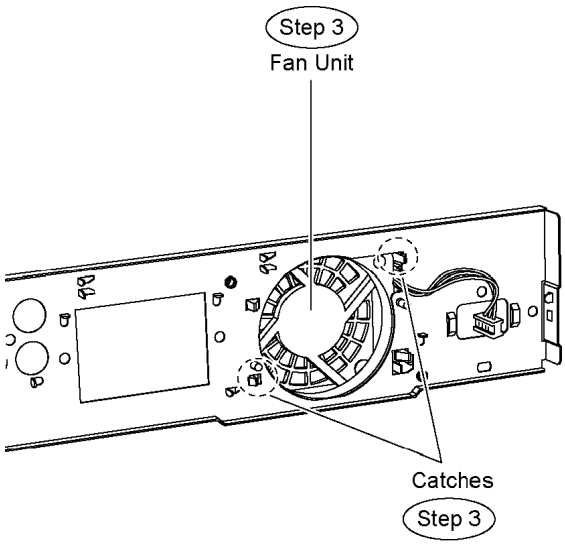
12.5. Checking & Repairing DVD Module P.C.B.

- Servicing Side A of DVD Module P.C.B.

Step 1 Remove the top cabinet.

Step 2 Remove the rear panel.

Step 3 Release the catches and remove the fan unit.



Step 4 Remove 2 screws on Main P.C.B.

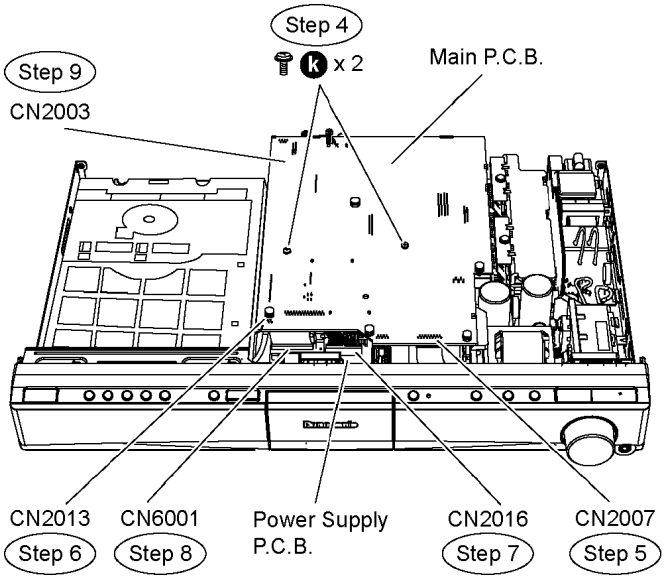
Step 5 Detach 17p cable at the connector (CN2007) on Main P.C.B.

Step 6 Detach 4P cable at the connector (CN2013) on Main P.C.B.

Step 7 Detach 13P cable at the connector (CN2016) on Power Supply P.C.B.

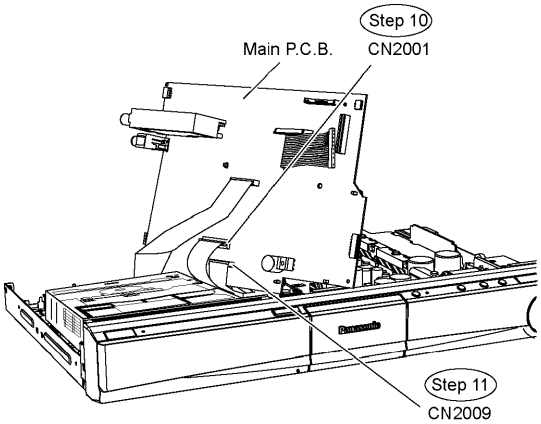
Step 8 Detach 28P cable at the connector (CN6001) on Power Supply P.C.B.

Step 9 Detach 14P cable at the connector (CN2003) on Main P.C.B.



Step 10 Turn over Main P.C.B. to detach 50P cable at the connector (CN2001).

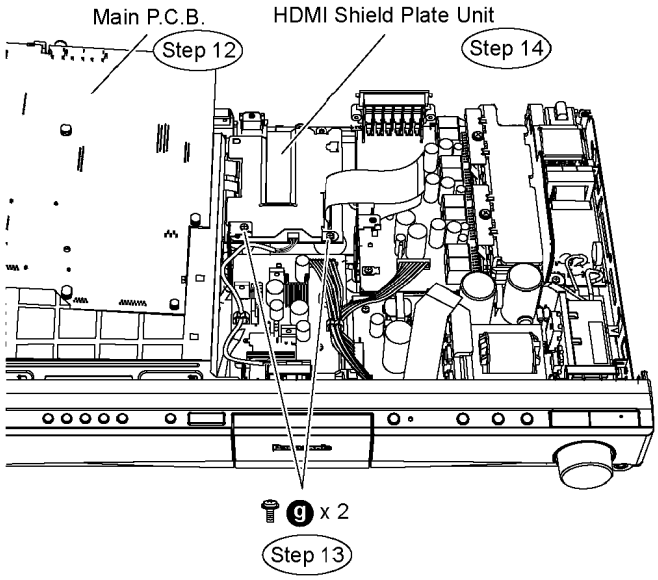
Step 11 Turn over Main P.C.B. to detach 17P cable at the connector (CN2009).



Step 12 Move aside Main P.C.B. and position it according to the diagram shown.

Step 13 Remove 2 screws from the HDMI shield plate unit.

Step 14 Remove the HDMI shield plate unit.



Caution Note: Keep the HDMI shield plate unit in safe place. Avoid denting it. Place it back during assembling.

Step 15 Move Main P.C.B. in the direction of arrow.

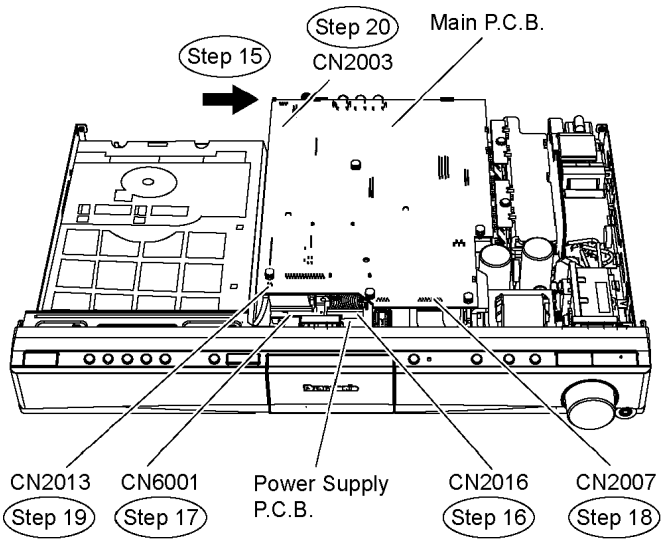
Step 16 Connect 13P cable at the connector (CN2016) on Power Supply P.C.B.

Step 17 Connect 28P cable at the connector (CN6001) on Power Supply P.C.B.

Step 18 Connect 17P cable at the connector (CN2007) on Main P.C.B.

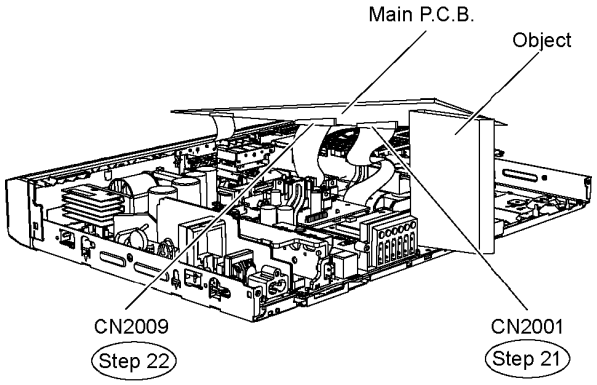
Step 19 Connect 4P cable at the connector (CN2013) on Main P.C.B.

Step 20 Connect 14P cable at the connector (CN2003) on Main P.C.B.



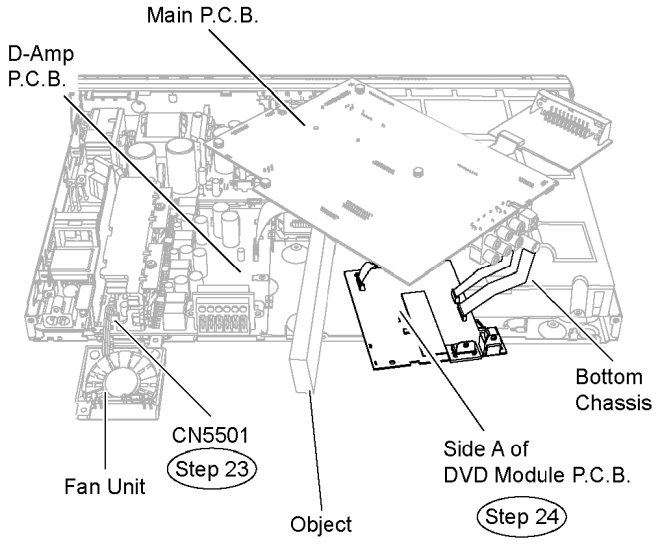
Step 21 Connect 50P cable at the connector (CN2001) on Main P.C.B.

Step 22 Connect 17P cable at the connector (CN2009) on Main P.C.B.



Step 23 Connect the fan unit at the connector (CN5501) on D-Amp P.C.B.

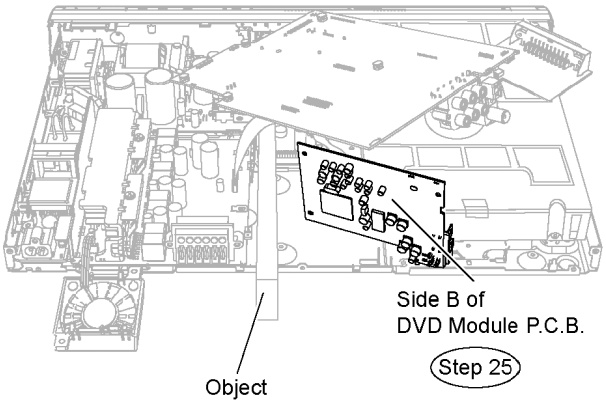
Step 24 Detach DVD Module P.C.B. from the bottom chassis and position its side A according to the diagram shown.



Note: An object can be placed beneath Main P.C.B. to adjust its height.

- Servicing side B of DVD Module P.C.B.

Step 25 Flip DVD Module P.C.B. to its side B and position it according to the diagram shown..



13 Measurements and Adjustments

13.1. Service Tools and Equipment

Application	Name	Number
Tilt adjustment	DVD test disc	DVDT-S20 [SPG]
	TORX screw driver (T6)	Available on sales route. (T6) or RFKZ0185 [SPG]
Others	Grease	RFKXPG641 [SPG]
Confirmation	CD test disc	PVCD-K06 or any other commercially available disc
	VCD test disc	PVCD-K06 or any other commercially available disc
	Recovery disc	RFKZD03R005 [SPG]

13.2. Important points in adjustment

13.2.1. Important points in optical adjustment

- Before starting optical adjustment, be sure to take anti-static measures.
- Optical pickup tilt adjustment is needed after replacement of the following components.

1. Optical pickup unit
2. Spindle motor unit
3. Optical pickup peripheral parts

Notes

Adjustment is generally unnecessary after replacing other parts of the traverse unit. However, make adjustment if there is a noticeable degradation in picture quality. Optical adjustments cannot be made inside the optical pickup. Adjustment is generally unnecessary after replacing the traverse unit.

13.2.2. Important points in electrical adjustment

- Follow the adjustment procedures described in this manual.

13.3. Storing and handling of test discs

- Surface precision is vital for DVD test discs. Be sure to store and handle them carefully.

1. Do not place discs directly onto the workbench, etc., after use.
2. Handle discs carefully in order to maintain their flatness. Place them into their case after use and store them vertically. Store discs in a cool place where they are not exposed to direct sunlight or air from air conditioners.
3. Accurate adjustment will not be possible if the disc is warped when placed on a surface made of glass, etc. If this happens, use a new test disc to make optical adjustments.
4. If adjustment is done using a warped disc, the adjustment will be incorrect and some discs will not be playable.

13.4. Optical adjustment

13.4.1. Optical pickup tilt adjustment

Measurement point	Adjustment point	Mode	Disc
	Tangential adjustment screw Tilt adjustment screw	T01 (inner periphery) play T30 (center periphery) T43 (outer periphery) play	DVDT-S20 [SPG]
Measuring equipment		Adjustment value	
None (Main unit display for servicing is used.)		Adjust to the minimum jitter value.	

13.4.1.1. Adjustment procedure

1. While pressing STOP button on the main unit, press "5" on the remote control unit.
2. Confirm that "J_xxx/yyy_zz" (Display 1/Display 2) is shown on the front display.

   For your information:

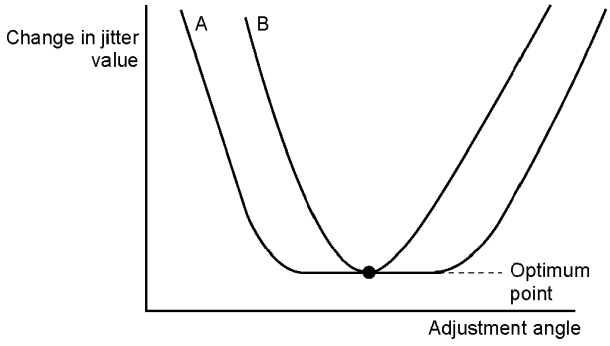
   "yyy" and "zz" have nothing to do with the jitter value. "yyy" is the error counter, while "zz" is the focus drive value.

   Note:

   Jitter value appears on the front display.
3. Play test disc T30 (center periphery).
4. Adjust tangential adjustment screw so that the jitter value is minimized.
5. Play test disc T30 (center periphery).
6. Adjust tilt adjustment screw 1 so that the jitter value is minimized.
7. Play test disc T30 (center periphery).
8. Adjust tilt adjustment screw 2 so that the jitter value is minimized.
9. Repeat adjusting tilt adjustment screws 1 and 2 alternately until the jitter value is minimized.

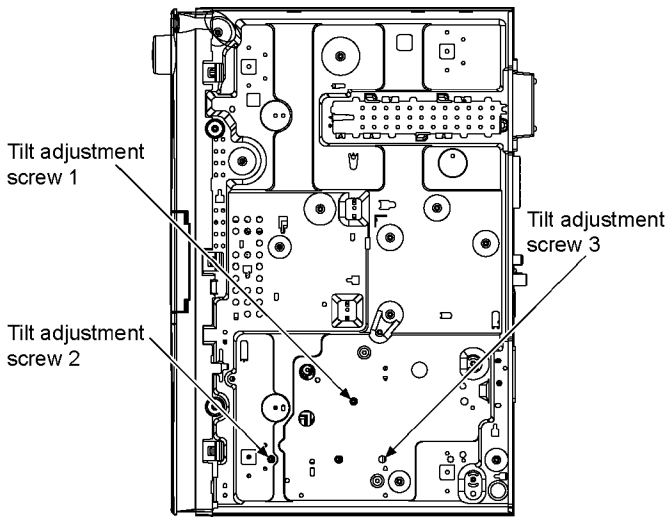
13.4.1.2. Important points

1. Make tangential adjustment first, and then make tilt adjustment.
2. Repeat adjusting two or three times to find the optimum point.
3. Finish the procedure with tilt adjustment.



Jitter value depends on the model:

1. If the jitter value changes like B, the optimum point is easy to find.
2. If the jitter value changes like A, set the optimum point near the middle.

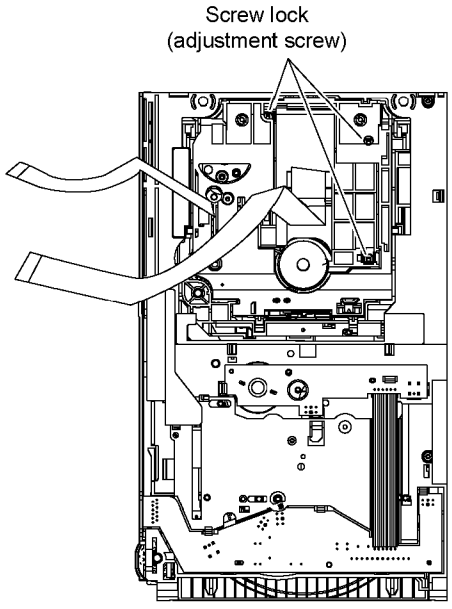


13.4.1.3. Check after adjustment

Play test disc or any other disc to make sure there is no picture degradation in the inner, middle and outer peripheries, and no audio skipping. After adjustment is finished, lock each adjustment screw in position using screw lock.

13.4.1.4. Procedure for screw lock

1. After adjustment, remove top cover, tray, clamper base and traverse unit in this sequence.
2. Lay the traverse unit upside down, and fix adjustment screw with screw lock.
3. After fixing, reassemble traverse unit, clamper base, tray and top cover.



14 Voltage and Waveform Chart

14.1. DVD Module P.C.B.

REF NO.	IC3901																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
CD PLAY	-	-	-	-	1.3	1.4	0	2.9	3.4	0	0.1	0.1	3.3	0	0.1	0.1	3.4	0	0	0
REF NO.	IC3901																			
MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
CD PLAY	3.3	0.1	0	0	3.4	0	0	3.3	0	0	0	0	1.6	3.4	0.9	0.1	0.1	0.9	0.1	3.4
REF NO.	IC3901																			
MODE	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
CD PLAY	1.7	1.3	1.7	0.1	1.7	0.1	1.3	0.1	0.1	0.1	0.1	3.4	0.1	0.1	1.3	0.1	0.1	0.1	0.1	0
REF NO.	IC3901																			
MODE	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
CD PLAY	0	0	0	-	-	0.1	0.1	0.1	0.1	3.4	0.1	0.1	0.1	0.1	1.3	0.1	0.1	0	0	0.1
REF NO.	IC3901																			
MODE	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
CD PLAY	0.1	0.1	0.1	3.4	1.3	0.1	1.0	0.9	1.8	1.3	0.1	2.2	0.9	0.6	2.1	0.1	0.1	0.1	0.1	3.4
REF NO.	IC3901																			
MODE	101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120
CD PLAY	0.1	1.3	0.1	0.1	0	3.4	3.4	3.4	1.3	0	1.8	0.1	3.3	3.3	3.4	1.3	1.7	0	0	3.4
REF NO.	IC3901																			
MODE	121	122	123	124	125	126	127	128												
CD PLAY	3.4	0	1.3	3.4	0	1.4	-	-												
REF NO.	IC3952																			
MODE	1	2	3	4	5															
CD PLAY	8.5	0	1.4	5.1	8.8															
REF NO.	IC8001																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
CD PLAY	0	0	0.1	3.3	0.1	3.3	0.1	0.1	1.0	0.9	1.7	1.2	2.2	0.9	0.1	3.3	0.6	2.0	0.1	1.2
REF NO.	IC8001																			
MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
CD PLAY	2.5	0	0	2.2	0	2.4	0	0.9	1.0	1.9	3.3	0	0	2.0	0.8	2.1	2.0	1.0	0.9	2.4
REF NO.	IC8001																			
MODE	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
CD PLAY	2.4	2.6	0.1	1.2	0.1	3.2	3.2	3.3	3.3	1.7	0.1	3.3	1.8	2.8	3.0	3.3	3.3	3.3	0.6	3.0
REF NO.	IC8001																			
MODE	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
CD PLAY	1.6	0.1	0.1	0.9	3.3	1.9	1.7	0	3.3	3.3	0	3.3	3.3	0	0.3	1.2	3.3	3.3	3.3	3.3
REF NO.	IC8001																			
MODE	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
CD PLAY	0.1	0.1	1.2	3.3	0.9	2.4	0.1	1.9	0.1	0.5	1.8	3.3	1.5	1.5	1.9	1.9	1.7	1.7	1.7	1.7
REF NO.	IC8001																			
MODE	101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120
CD PLAY	0	0	0.2	0.1	0.2	2.1	3.3	0	2.3	1.7	2.5	2.5	2.5	2.5	2.5	2.5	2.4	2.4	2.4	2.5
REF NO.	IC8001																			
MODE	121	122	123	124	125	126	127	128	129	130	131	132	133	134	135	136	137	138	139	140
CD PLAY	1.9	2.0	1.7	1.7	0.1	1.7	1.7	3.3	0.9	0.9	0.5	3.3	2.4	1.0	1.0	2.4	0.1	0.5	0.9	0.1
REF NO.	IC8001																			
MODE	141	142	143	144	145	146	147	148	149	150	151	152	153	154	155	156	157	158	159	160
CD PLAY	3.3	3.3	0	0	0	0	3.3	1.5	1.7	1.7	0.9	1.7	0	3.3	1.5	1.6	0	1.2	3.0	-
REF NO.	IC8001																			
MODE	161	162	163	164	165	166	167	168	169	170	171	172	173	174	175	176	177	178	179	180
CD PLAY	3.0	3.0	3.1	3.0	0	3.3	3.0	3.2	3.2	3.0	3.0	3.2	0	3.3	3.0	3.1	3.2	2.9	2.9	2.9
REF NO.	IC8001																			
MODE	181	182	183	184	185	186	187	188	189	190	191	192	193	194	195	196	197	198	199	200
CD PLAY	3.3	1.6	1.6	3.3	1.6	0	1.2	3.3	3.3	3.2	3.6	0	2.0	0	0	3.3	1.6	0.1	0	1.6
REF NO.	IC8001																			
MODE	201	202	203	204	205	206	207	208	209	210	211	212	213	214	215	216				
CD PLAY	0.1	1.6	0.4	0	3.3	1.7	1.8	0.4	1.6	0	1.2	2.3	2.7	2.7	3.3	0				
REF NO.	IC8051																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
CD PLAY	3.3	3.2	3.3	2.9	2.9	0	3.2	3.0	3.3	3.2	3.0	0	2.8	3.3	2.8	3.3	3.3	3.2	3.2	2.0
REF NO.	IC8051																			
MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
CD PLAY	1.6	0	0.1	0.4	0.4	1.6	3.3	0	1.5	1.7	1.7	1.6	0	0	0	-	3.3	1.6	2.9	-
REF NO.	IC8051																			
MODE	41	42	43	44	45	46	47	48	49	50	51	52	53	54						
CD PLAY	0	3.2	3.3	3.0	0	0	3.2	2.9	3.3	3.1	2.9	0	3.0	0						
REF NO.	IC8111																			
MODE	1	2	3	4	5	6	7	8												
CD PLAY	3.3	-	0	1.9	4.8	-	-	5.1												
REF NO.	IC8151																			
MODE	1	2	3	4	5															
CD PLAY	2.3	2.3	0	1.3	0.8															
REF NO.	IC8251																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
CD PLAY	1.7	1.7	1.7	2.2	2.2	2.0	0.1	5.1	3.3	0	2.5	2.7	2.5	2.7	4.1	4.2	5.0	3.3	0	3.3
REF NO.	IC8251																			
MODE	21	22	23	24	25	26	27	28	29	30										
CD PLAY	8.9	8.7	1.8	1.7	1.7	1.7	3.3	3.3	0	0										

REF NO.	IC8421																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
CD PLAY	1.7	1.7	0.9	1.7	3.3	3.3	3.3	0	0.9	0.1	0.1	5.1	5.1	5.1	0	0	2.6	2.6	2.6	2.6
REF NO.	IC8421																			
MODE	21	22	23	24	25	26	27	28	29	30										
CD PLAY	2.6	2.6	0	0.2	2.6	2.6	0	5.1	5.1	5.1										
REF NO.	IC8422																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16				
CD PLAY	2.6	2.6	0	2.6	0	5.1	5.1	0	1.4	1.7	1.6	1.7	3.3	0	5.1	0				
REF NO.	IC8601																			
MODE	1	2	3	4																
CD PLAY	3.3	1.2	0	0																
REF NO.	IC8606																			
MODE	1	2	3	4	5															
CD PLAY	3.3	3.3	0	0	-															
REF NO.	IC8611																			
MODE	1	2	3	4	5	6	7	8												
CD PLAY	0	0	0	0	3.2	3.2	0	3.3												
REF NO.	IC8651																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
CD PLAY	2.6	2.4	2.2	0.6	2.5	1.2	0.9	1.1	1.9	0	3.3	3.3	3.3	3.3	1.1	2.1	0.8	2.2	2.1	1.0
REF NO.	IC8651																			
MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
CD PLAY	0.9	2.5	2.4	2.6	2.3	2.7	0	2.7	2.2	2.5	2.3	2.2	0.5	2.4	1.1	1.0	3.3	1.0	2.2	2.1
REF NO.	IC8651																			
MODE	41	42	43	44	45	46	47	48												
CD PLAY	1.0	0	2.4	2.4	2.5	0	3.3	2.5												
REF NO.	IC8691																			
MODE	1	2	3	4	5															
CD PLAY	3.0	3.0	0	4.5	5.1															
REF NO.	IC8695																			
MODE	1	2	3	4	5															
CD PLAY	2.7	2.7	0	4.2	5.1															
REF NO.	IC8701																			
MODE	1	2	3	4	5															
CD PLAY	-	1.5	0	1.8	3.3															
REF NO.	IC8901																			
MODE	1	2	3	4	5															
CD PLAY	3.3	3.3	0	3.3	3.3															
REF NO.	IC9001																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
CD PLAY	0	2.2	2.6	2.4	2.4	0.9	0.9	2.0	2.2	0	2.7	2.2	2.1	1.0	0.9	2.5	2.4	2.6	2.3	3.3
REF NO.	IC9002																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
CD PLAY	0	1	1	1.1	2.4	0.6	2.1	2.3	2.5	0	2.7	2.6	2.3	2.3	0.6	2.5	1.2	1.0	1.0	3.3
REF NO.	Q3901				Q3902				Q3903				Q3941				Q3942			
MODE	E	C	B		E	C	B		E	C	B		E	C	B		E	C	B	
CD PLAY	0	0	0.7		3.3	0	3.4		3.3	5.1	0		3.7	3.7	3.7		0	0	0	
REF NO.	Q3943				Q8321				Q8325				Q8331				Q8335			
MODE	E	C	B		E	C	B		E	C	B		E	C	B		E	C	B	
CD PLAY	4.1	5.9	4.7		1.2	0	0.5		1.5	0	0.9		1.2	0	0.5		1.5	0	0.9	
REF NO.	Q8341				Q8551				Q8552				Q8561				Q8562			
MODE	E	C	B		E	C	B		E	C	B		E	C	B		E	C	B	
CD PLAY	1.5	0	0.9		0	5.1	0.1		5.1	0.1	5.1		1.5	3.7	2.1		4.3	1.9	3.7	
REF NO.	Q8563				Q8564				Q8565				QR8111							
MODE	S	D	G		S	D	G		S	D	G		1	2	3	4	5	6		
CD PLAY	0	0.2	0.1		0	0	3.3		0	0.1	0.7		0	0	1.2	0	0	4.8		
REF NO.	QR8420																			
MODE	E	C	B																	
CD PLAY	0	4.3	0																	

PT660P/PC DVD MODULE P.C.B.

14.2. D-Amp P.C.B.

REF NO.	IC5000																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
CD PLAY	2.5	0.1	0.1	2.9	0	-29.3	-29.3	29.3	11	-0.1	-29.5	-17.3	-29.5	-0.1	11	29.3	-29.3	-29.3	0	29
STANDBY	2.5	0.1	0.1	2.9	0	-29.3	-21	29.3	11	-0.1	-29.5	-17.3	-29.5	-0.1	11	29.3	-29.3	-29.2	0	29
REF NO.	IC5000																			
MODE	21	22	23																	
CD PLAY	-0.1	-0.1	2.5																	
STANDBY	-0.1	-0.1	2.5																	
REF NO.	IC5200																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
CD PLAY	2.5	-0.1	-0.1	29	0	-29.3	-29.3	29.3	11	-0.1	-29.5	-17.3	-29.5	-0.1	11	29.3	-29.3	-29.3	0	29
STANDBY	2.5	-0.1	-0.1	29	0	-29.3	-29.3	29.3	11	-0.1	-29.5	-17.3	-29.5	-0.1	11	29.3	-29.3	-29.3	0	29
REF NO.	IC5200																			
MODE	21	22	23																	
CD PLAY	-0.1	-0.1	2.5																	
STANDBY	-0.1	-0.1	2.5																	
REF NO.	IC5300																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
CD PLAY	2.5	-0.1	-0.1	29	0	-29.3	-29.3	29.3	11	-0.1	-29.5	-17.3	-29.5	-0.1	11	29.3	-29.3	-29.3	0	29
STANDBY	2.5	-0.1	-0.1	29	0	-29.3	-29.3	29.3	11	-0.1	-29.5	-17.3	-29.5	-0.1	11	29.3	-29.3	-29.3	0	29
REF NO.	IC5300																			
MODE	21	22	23																	
CD PLAY	-0.1	-0.1	2.5																	
STANDBY	-0.1	-0.1	2.5																	
REF NO.	IC5400																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
CD PLAY	2.5	-0.1	-0.1	29	0	-29.3	-29.3	29.3	11	-0.1	-29.5	-17.3	-29.5	-0.1	11	29.3	-29.3	-29.3	0	29
STANDBY	2.5	-0.1	-0.1	29	0	-29.3	-29.3	29.3	11	-0.1	-29.5	-17.3	-29.5	-0.1	11	29.3	-29.3	-29.3	0	29
REF NO.	IC5400																			
MODE	21	22	23																	
CD PLAY	-0.1	-0.1	2.5																	
STANDBY	-0.1	-0.1	2.5																	
REF NO.	IC5500																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14						
CD PLAY	0	5.2	5	0	2.7	2.2	0	2.5	2.6	2.6	2.5	0	5.2	5.2						
STANDBY	0	5.2	5	0	2.7	2.2	0	2.5	2.6	2.6	2.5	0	5.2	5.2						
REF NO.	IC5501																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14						
CD PLAY	2.5	2.6	2.5	0	2.6	0	0	0	0	0	0	0	5.2	5.2						
STANDBY	2.5	2.6	2.5	0	2.6	0	0	0	0	0	0	0	5.2	5.2						
REF NO.	Q5101				Q5102				Q5601				Q5602				Q5603			
MODE	E	C	B		E	C	B		E	C	B		E	C	B		E	C	B	
CD PLAY	0	5.2	0		0	5.2	0		0	0	0.7		0	0	0.7		5.2	5.1	4.4	
STANDBY	0	5.2	0		0	5.2	0		0	0	0.7		0	0	0.7		5.2	5.1	4.5	
REF NO.	Q5604				Q5640				Q5641				Q5642				Q5644			
MODE	E	C	B		E	C	B		E	C	B		E	C	B		E	C	B	
CD PLAY	0	0	0.7		6.9	16.4	7.4		0	5.2	0		0	0	0.7		0	3.7	0	
STANDBY	0	0	0.7		6.9	16.4	7.4		0	5.2	0		0	0	0.7		0	3.7	0	

PT660P/PC D-AMP P.C.B.

14.3. Main P.C.B.

REF NO.	IC2001																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
CD PLAY	1.7	0	5.2	5.2	5.2	0	1.6	0	0	1.7	5.2	5.2	2.6	0	-	5.2	5.2	5.2	3.8	1.7
STANDBY	1.7	0	5.2	5.2	5.2	0	1.6	0	0	1.6	5.2	5.1	2.6	0	-	5.2	5.2	5.2	3.8	1.6
REF NO.	IC2001																			
MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
CD PLAY	0	5.2	0	0	0	5.2	0	4.6	4.2	1.8	0	1.6	5.2	5.2	0	1.7	5.2	5.2	5.2	5.2
STANDBY	0	5.2	0	0	0	5.2	0	4.6	4.3	1.8	0	1.7	5.2	5.1	0	1.8	5.2	5.2	5.2	5.1
REF NO.	IC2001																			
MODE	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
CD PLAY	0	0	5.1	0	0	0	5.2	0	0	1.7	5.2	0	0	0	0	0	0	0	0	1.9
STANDBY	0	5.2	5.0	5.0	0	0	5.2	0	0	1.8	5.1	0	0	0	0	0	0	0	0	1.9
REF NO.	IC2001																			
MODE	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
CD PLAY	5.2	5.2	5.2	0	0	1.4	0	5.0	0	0	5.2	1.8	0	5.2	5.7	5.2	0	0	0	5.2
STANDBY	5.2	5.2	5.2	0	0	1.4	0	5.0	5.1	0	5.1	1.7	0	5.2	5.7	5.2	0	5.0	0	5.2
REF NO.	IC2001																			
MODE	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
CD PLAY	2.8	1.7	0	0	4.2	2.6	1.9	5.2	2.6	0	2.6	1.8	0	2.6	1.3	0	3.6	5.2	5.2	0
STANDBY	2.8	1.7	0	0	4.2	2.6	1.9	5.1	2.6	0	2.6	1.7	0	2.6	1.3	0	3.6	5.2	5.2	0
REF NO.	IC2002																			
MODE	1	2	3	4	5															
CD PLAY	5.2	0	5.2	0	3.3															
STANDBY	5.2	0	5.1	0	3.3															
REF NO.	IC2003																			
MODE	1	2	3	4	5	6	7	8												
CD PLAY	0	0	0	0	0	1.8	0	5.2												
STANDBY	0	0	0	0	0	1.8	0	5.2												
REF NO.	IC2101																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
CD PLAY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
STANDBY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
REF NO.	IC2101																			
MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
CD PLAY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
STANDBY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
REF NO.	IC2101																			
MODE	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
CD PLAY	0	0	0	0	0	0	0	0	0	1.2	0	0	0	0	0	0	0	0	0	0
STANDBY	0	0	0	0	0	0	0	0	0	1.2	0	0	0	0	0	0	0	0	0	0
REF NO.	0																			
MODE	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
CD PLAY	0	5.2	0	5.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
STANDBY	0	5.2	0	5.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
REF NO.	IC2101																			
MODE	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
CD PLAY	0	0	6.8	6.8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
STANDBY	0	0	6.8	6.9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
REF NO.	IC2102																			
MODE	1	2	3	4	5	6	7	8												
CD PLAY	0	0	0	6.8	0	0	0	6.8												
STANDBY	0	0	0	6.8	0	0	0	6.9												
REF NO.	IC2104																			
MODE	1	2	3	4	5	6	7	8												
CD PLAY	0	0	0	-7.1	0	0	0	7.0												
STANDBY	0	0	0	0.4	0	0	0	0.1												
REF NO.	IC2105																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16				
CD PLAY	0	0	0	0	0	0	-7.1	0	4.9	4.9	0	0	0	0	0	7				
STANDBY	0	0	0	0	0	0	0.4	0	0	0	0	0	0	0	0	0.1				
REF NO.	IC2501																			
MODE	1	2	3	4	5	6	7	8												
CD PLAY	0	0	0	6.7	0	0	0	6.8												
STANDBY	0	0	0	6.7	0	0	0	6.9												
REF NO.	IC2801																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
CD PLAY	5.1	0	0	2.2	5.0	0.1	0	1.5	2.2	0	1.5	0	2.2	5.0	2.2	5.1	2.3	2.3	0	2.3
STANDBY	5.1	0	0	2.2	5.0	0.1	0	1.5	2.2	0	1.5	0	2.2	5.5	2.2	5.1	2.3	2.3	0	2.3
REF NO.	IC2801																			
MODE	21	22	23	24	25	26	27	28	29	30	31	32								
CD PLAY	2.3	0	1.4	1.4	0	1.4	1.4	0	1.5	1.5	0	2.3								
STANDBY	2.3	0	1.4	1.4	0	1.4	1.4	0	1.5	1.5	0	2.3								
REF NO.	Q2002				Q2003				Q2004				Q2005				Q2006			
MODE	E	C	B		E	C	B		E	C	B		E	C	B		E	C	B	
CD PLAY	3.5	5.2	4.2		0	5.2	0		0	1.6	0		3.3	1.6	5.2		0	0	4.3	
STANDBY	3.5	5.2	4.2		0	5.1	0		0	1.6	0		3.3	1.6	5.2		0	5.2	0	

REF NO.	Q2007				Q2013				Q2030				Q2096				Q2097			
MODE	E	C	B		E	C	B		E	C	B		E	C	B		E	C	B	
CD PLAY	0	5.2	0		4.8	4.7	4.8		3.6	5.2	4.3		0	0	0.6		0	5.8	0	
STANDBY	0	5.2	0		-7.1	-9.8	-7.7		3.6	5.2	4.3		0	0	0.6		0	5.7	0	

REF NO.	Q2101							Q2102							Q2103					
MODE	1	2	3	4	5	6		1	2	3	4	5	6		E	C	B			
CD PLAY	0	4.5	0	0	4.5	0		0	4.5	0	0	4.5	0		0	4.5	0			
STANDBY	0	1.0	0	0	1.0	0		0	1.0	0	0	1.0	0		1.5	1.5	0			

REF NO.	Q2104							Q2203				Q2501				Q2502				
MODE	1	2	3	4	5	6		E	C	B		E	C	B		E	C	B		
CD PLAY	0	4.5	0	0	4.5	0		0	4.5	0		0	0	5.0		0	0	5.0		
STANDBY	0	1.0	0	0	1.0	0		1.5	1.5	0		0	0	5.0		0	0	5.0		

REF NO.	Q2801				Q2909				Q2919				Q2923				Q2924			
MODE	E	C	B		E	C	B		E	C	B		E	C	B		E	C	B	
CD PLAY	0	5.0	0		0	5.1	0		0	5.1	0		0	0	2		0	5.1	0	
STANDBY	0	5.0	0		0	5.1	0		0	5.2	0		0	0	2		0	5.1	0	

PT660P/PC MAIN P.C.B.

14.4. Panel P.C.B.

REF NO.	IC6901																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
CD PLAY	0	0	0	0	29	0	0	4.1	2.5	1.9	1.9	0	5.0	24.4	24.4	22	24.4	17.2	19.7	14.9
STANDBY	0	0	0	0	29	0	0	4.1	2.5	1.9	1.9	0	5.0	24.5	24.5	22	24.4	14.9	19.7	12.5

REF NO.	IC6901																			
MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
CD PLAY	24.4	24.4	24.4	17.2	17.2	24.4	24.4	24.4	17.3	24.9	15	17.4	22.3	22.3	22.3	22.3	22.3	22.3	22.3	22.3
STANDBY	24.5	24.5	24.5	17.3	17.3	24.5	24.5	24.5	17.3	25	15	15.1	22.4	22.3	22.3	22.3	22.3	22.3	22.3	22.3

REF NO.	IC6901																			
MODE	41	42	43	44																
CD PLAY	22.3	22.2	5.0	0																
STANDBY	22.3	22.2	5.0	0																

REF NO.	Q6910																			
MODE	E	C	B																	
CD PLAY	0	4.8	0																	
STANDBY	0	4.8	0																	

PT660P/PC PANEL P.C.B.

14.5. Power Supply P.C.B.

REF NO.	IC2900																			
MODE	1	2	3	4	5															
CD PLAY	16.6	8.8	0	1	15.9															
STANDBY	16.8	8.8	0	1	16.1															

REF NO.	IC2903																			
MODE	1	2	3	4	5															
CD PLAY	16.6	5.2	0	1	16															
STANDBY	16.8	5.2	0	1	16.2															

REF NO.	IC6101																			
MODE	1	2	3	4	5	6	7	8												
CD PLAY	3.4	3.4	3.4	0	3.4	3.4	3.4	6.8												
STANDBY	3.4	3.4	3.4	0	3.4	3.4	3.4	6.8												

REF NO.	IC6601																			
MODE	1	2	3	4	5															
CD PLAY	1	0	6.8	1.7	1.7															
STANDBY	1	0	6.8	1.7	1.7															

REF NO.	IC6602																			
MODE	1	2	3	4	5															
CD PLAY	0	5.2	0	0	-															
STANDBY	0	5.2	0	0	-															

REF NO.	Q2900				Q2901				Q2902				Q2903				Q2904			
MODE	E	C	B		E	C	B		E	C	B		E	C	B		E	C	B	
CD PLAY	0	16.5	-0.5		-6.8	-9.8	-7.4		0	-7.4	-0.6		6.8	8.9	7.5		2.4	4.6	3.1	
STANDBY	0	16.6	-0.5		-6.8	-10	-7.4		0	-7.4	-0.6		6.8	8.9	7.5		2.4	4.6	3.1	

REF NO.	Q2921				Q2922															
MODE	E	C	B		E	C	B													
CD PLAY	5.2	0	5.1		0	5.1	0													
STANDBY	5.2	0	5.1		0	5.1	0													

PT660P/PC POWER SUPPLY P.C.B.

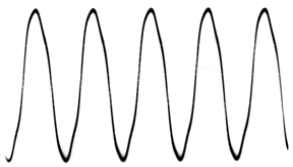
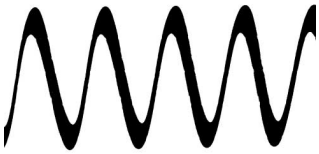
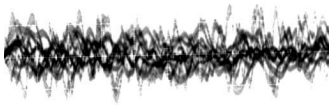
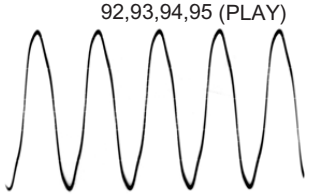
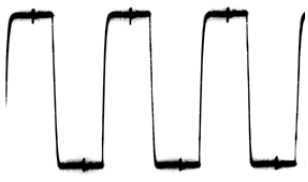
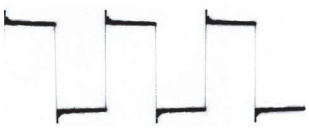
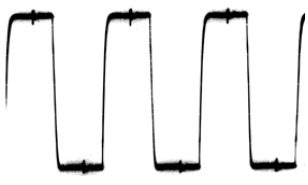
14.6. SMPS P.C.B.

REF NO.	IC5701																			
MODE	1	2	3	4	5	6	7													
CD PLAY	162	0	0	19.3	0.1	1.4	0.5													
STANDBY	162	0	0	19.3	0.1	1.4	0.5													
REF NO.	IC5799																			
MODE	1	2	3	4	5	6	7	8												
CD PLAY	6.0	1.6	1.8	20.3	162.2	-	0	0												
STANDBY	6.0	1.6	2.0	20.3	163.0	-	0	0												
REF NO.	IC5801																			
MODE	1	2	3																	
CD PLAY	-2.2	-29.5	-26.8																	
STANDBY	-2.2	-29.5	-26.8																	
REF NO.	IC5899																			
MODE	1	2	3																	
CD PLAY	4.2	0	2.5																	
STANDBY	4.2	0	2.5																	
REF NO.	Q5720				Q5721				Q5722				Q5802				Q5803			
MODE	E	C	B		E	C	B		E	C	B		E	C	B		E	C	B	
CD PLAY	5.9	6.5	5.6		19.9	19.9	19.2		0	17.0	0.1		-21.9	-2.2	-22		0	5.8	0	
STANDBY	5.9	6.6	5.6		19.9	19.9	19.2		0	16.8	0.1		-21.8	-2.2	-22		0	5.8	0	
REF NO.	Q5860				Q5861				Q5862				QR5801				QR5802			
MODE	E	C	B		E	C	B		E	C	B		E	C	B		E	C	B	
CD PLAY	1.3	0	0.7		0	0	0.7		0	5.2	0		0	5.0	0		0	4.5	0	
STANDBY	1.3	0	0.7		0	0	0.7		0	5.2	0		0	5.0	0		1.5	1.5	0	
REF NO.	QR5810				Q5898															
MODE	E	C	B		E	C	B													
CD PLAY	0	0.1	5		0	3.2	0.5													
STANDBY	0	0	5		0	3.2	0.5													

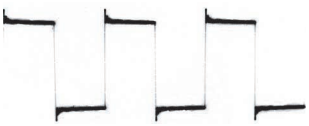
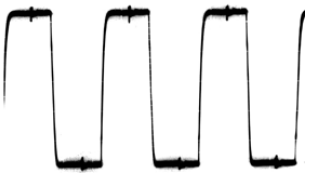
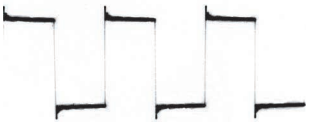
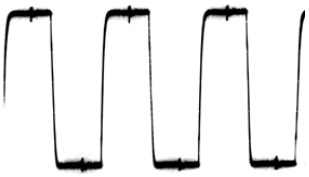
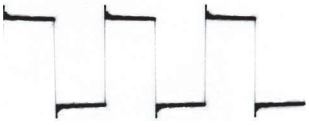
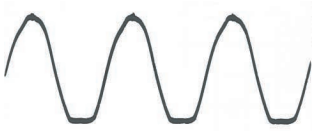
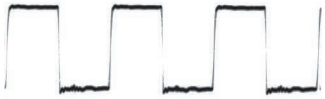
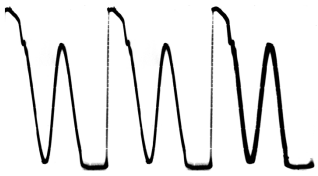
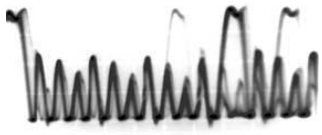
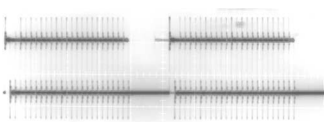
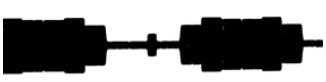
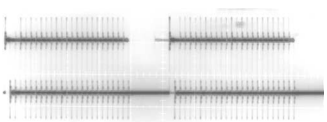
PT660P/PC SMPS P.C.B.

14.7. Waveform Chart

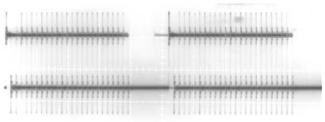
14.7.1. Waveform 1

WF No. IC2001-13 (PLAY)  5.2Vp-p(50usec/div)	WF No. IC2001-15 (PLAY)  3.8Vp-p(50usec/div)	WF No. IC2101-13 (PLAY) 5Vp-p(200usec/div)	WF No. IC2101-14,15,16,17, 18 (PLAY) 0.36Vp-p(200usec/div)
WF No. IC2101-19 (PLAY) 0.22Vp-p(200usec/div)	WF No. IC2101-30,41 (PLAY) 0.4Vp-p(200usec/div)	WF No. IC2101-44 (PLAY) 0.5Vp-p(5msec/div)	WF No. IC2101-52 (PLAY) 0.62Vp-p(200usec/div)
WF No. IC2101-60 (PLAY) 0.6Vp-p(20usec/div)	WF No. IC2101-80 (PLAY) 1.75Vp-p(200usec/div)	WF No. IC2101-81,82 (PLAY) 2.8Vp-p(200usec/div)	WF No. IC2101-95 (PLAY) 2.8Vp-p(200usec/div)
WF No. IC2101-96 (PLAY) 0.38Vp-p(200usec/div)	WF No. IC2101-99 (PLAY) 7.4Vp-p(200usec/div)	WF No. IC2101-100 (PLAY) 0.98Vp-p(200usec/div)	WF No. IC2102-1 (PLAY) 0.7Vp-p(200usec/div)
WF No. IC2102-7 (PLAY)  0.7Vp-p(200usec/div)	WF No. IC3901-87,88,89,90, 92,93,94,95 (PLAY)  3.3Vp-p(20usec/div)	WF No. IC5000-1 (PLAY)  5.6Vp-p(1usec/div)	WF No. IC5000-2 (PLAY) 0.84Vp-p(200usec/div)
WF No. IC5000-10,14 (PLAY)  80Vp-p(1usec/div)	WF No. IC5000-22 (PLAY) 0.84Vp-p(200usec/div)	WF No. IC5200-1 (PLAY)  5.6Vp-p(1usec/div)	WF No. IC5200-2 (PLAY) 0.84Vp-p(200usec/div)

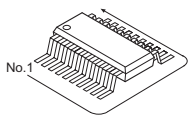
14.7.2. Waveform 2

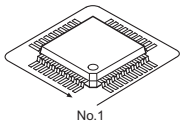
WF No. IC5200-10,14 (PLAY)  80Vp-p(1usec/div)	WF No. IC5200-22 (PLAY) 0.84Vp-p(200usec/div)	WF No. IC5300-1 (PLAY)  5.6Vp-p(1usec/div)	WF No. IC5300-2 (PLAY) 0.84Vp-p(200usec/div)
WF No. IC5300-10,14 (PLAY)  80Vp-p(1usec/div)	WF No. IC5300-22 (PLAY) 0.84Vp-p(200usec/div)	WF No. IC5400-1 (PLAY)  5.6Vp-p(1usec/div)	WF No. IC5400-2 (PLAY) 0.84Vp-p(200usec/div)
WF No. IC5400-10,14 (PLAY)  80Vp-p(1usec/div)	WF No. IC5400-22 (PLAY) 0.84Vp-p(200usec/div)	WF No. IC5500-5 (PLAY)  7.2Vp-p(500nsec/div)	WF No. IC5500-8 (PLAY)  5.6Vp-p(500usec/div)
WF No. IC5701-1 (PLAY)  400Vp-p(2usec/div)	WF No. IC5701-4,6 (PLAY) 2Vp-p(5usec/div)	WF No. IC5799-2 (PLAY) 2Vp-p(5usec/div)	WF No. IC5799-3 (PLAY)  9.6Vp-p(5usec/div)
WF No. IC5799-5 (PLAY) 240Vp-p(50usec/div)	WF No. IC5899-1,2,3 (PLAY) 1.65Vp-p(5msec/div)	WF No. IC6901-5 (PLAY) 2.15Vp-p(2usec/div)	WF No. IC6901-8 (PLAY) 5.6Vp-p(2usec/div)
WF No. IC8001-59,62,63,64 (PLAY)  6Vp-p(2usec/div)	WF No. IC8001-138 (PLAY) 1.05Vp-p(20usec/div)	WF No. IC8001-139 (PLAY)  0.95Vp-p(10usec/div)	WF No. IC8421-9,10,11 (PLAY)  7.2Vp-p(2usec/div)

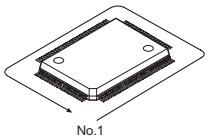
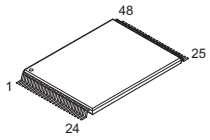
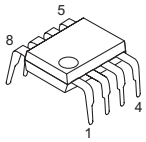
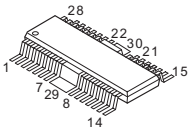
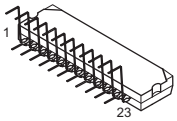
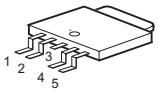
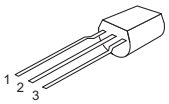
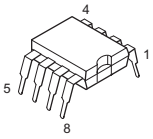
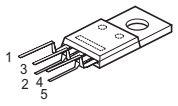
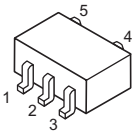
14.7.3. Waveform 3

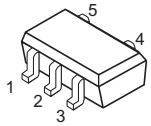
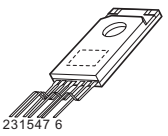
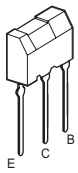
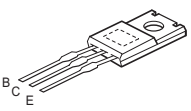
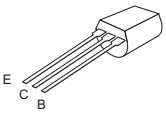
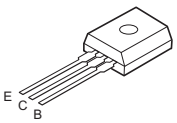
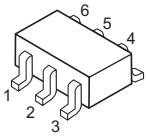
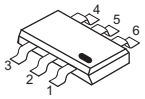
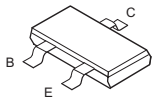
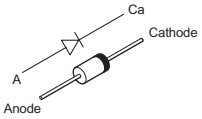
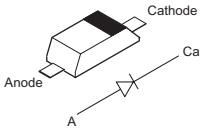
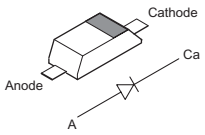
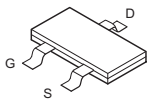
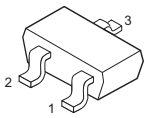
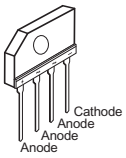
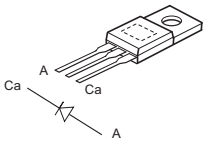
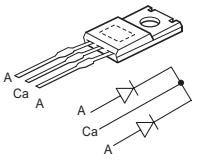
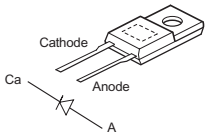
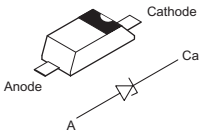
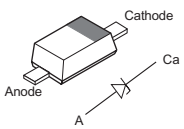
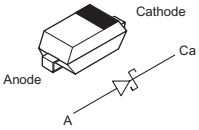
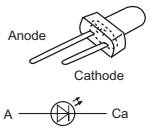
WF No. IC8421-17 (PLAY) 2Vp-p(5msec/div)	WF No. IC8421-18,19,20,21,22 (PLAY) 3.6Vp-p(200usec/div)	WF No. IC8421-24 (PLAY) 3.6Vp-p(200usec/div)	WF No. IC8421-25 (PLAY) 0.5Vp-p(200usec/div)
WF No. IC8422-1 (PLAY) 2.9Vp-p(200usec/div)	WF No. IC8422-2 (PLAY) 0.4Vp-p(200usec/div)	WF No. IC8422-9 (PLAY)  7.2Vp-p(2usec/div)	

15 Illustration of IC's, Transistors and Diodes

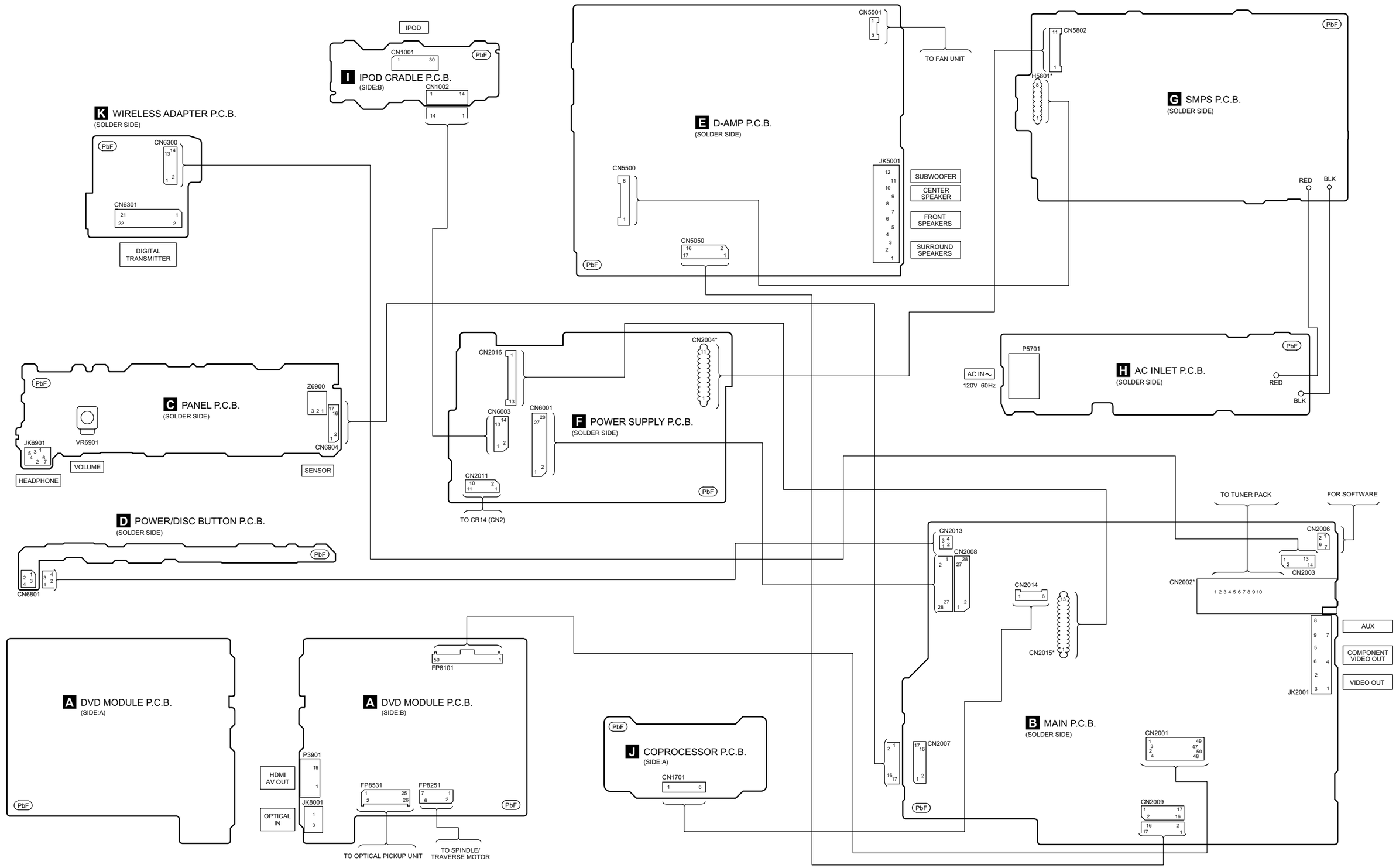
<table>
<tr>
<td colspan="3"> 

C0ABBB000230 (8p)
C0DBZYY00018 (8p)
C0FBAK000026 (16p)
C0FBBK000044 (30p)
C0JBAB000902 (14p)
C0JBAF000716 (14p)
C0JBAR000540 (16p)
C0JBAZ001251 (20p)
C3ABPY000011 (54p)
C9ZB00000461 (32p)</td>
<td colspan="2"> 

C0HBB0000057 (44p)
RFKWPT760P (100p)
MFI341S2095 (40p)
MN2DS0018DP (216p)
MN864702A (128p)</td>
<td>C1AB00002735 (100p)
 
</td>
</tr>
<tr>
<td>RFKWMH32B323 (48p)
 
</td>
<td>C0AABB000125 (8P)
 
</td>
<td>C0GBG0000048 (28P)
 
</td>
<td>C1BA00000487 (23P)
 
</td>
<td>C0CBCDG00003 (5p)
C0DBEHG00006 (5p)
 
</td>
<td>C0DABFC00002 (3p)
C0DAEMZ00001 (3p)
 
</td>
</tr>
<tr>
<td>MIP4110MSSCF (8P)
C3EBGC000056 (8P)
 
</td>
<td>C0DAAMH00012 (5p)
C0DAAYY00042 (5p)
 
</td>
<td colspan="2"> 

C0ABAA000114 (5p)
C0CBCBC00140 (5p)
C0CBCDC00063 (5p)
C0EBA0000039 (5p)
C0EBE0000456 (5p)</td>
<td>C0JBAA000501 (5p)
C0JBAA000502 (5p)
C0JBAB000907 (5p)
 
</td>
<td>C5HACYY00004 (7p)
 
</td>
</tr>
<tr>
<td>B1BABK000001
 
</td>
<td>B1BACG000023
B1BCCG000002
 
</td>
<td>2SC3940ARA
 
</td>
<td>B1BACD000018
 
</td>
<td>B1HBECA00004
 
</td>
<td>XP0621400L
 
</td>
</tr>
<tr>
<td>B1ABCF000176
B1ADCE000012
 
</td>
<td>B1ADCF000001
B1ADGB000008
B1GBCFJJ0051
B1GBCFJN0033
B1GBCFLL0037
B1GDCFGA0018</td>
<td>UNR221400L
UNR521100L
2SA207700L
2SB1218ARL
2SC584500L
2SD0601AHL
2SD1819A0L</td>
<td>B0EAKM000117
B0EAMM000057
B0HAMP000094
B0JAME000029
 
</td>
<td>B0ACCK000005
 
</td>
<td>MA2J11100L
MA2J72800L
 
</td>
</tr>
<tr>
<td>B1CFHA000002
 
</td>
<td>B1CFGC000004
 
</td>
<td>B0FBAR000041
 
</td>
<td>B0ZAZ0000052
 
</td>
<td>B0HBSM000043
 
</td>
<td>B0HFRJ000012
 
</td>
</tr>
<tr>
<td> 
</td>
<td>B0BC010A0007
B0BC019A0007
B0BC035A0007
B0BC2R4A0006
B0BC3R400001
B0BC5R000009
B0BC6R100010
B0BC7R500001
B0HCMM000019</td>
<td> 
</td>
<td>MAZ80510ML
MAZ80750ML
MAZ81200ML
MAZ81800ML
MAZ82400HL</td>
<td>B0JCPD000025
 
</td>
<td>B3ABA0000397
 
</td>
</tr>
</table>

16 Wiring Connection Diagram

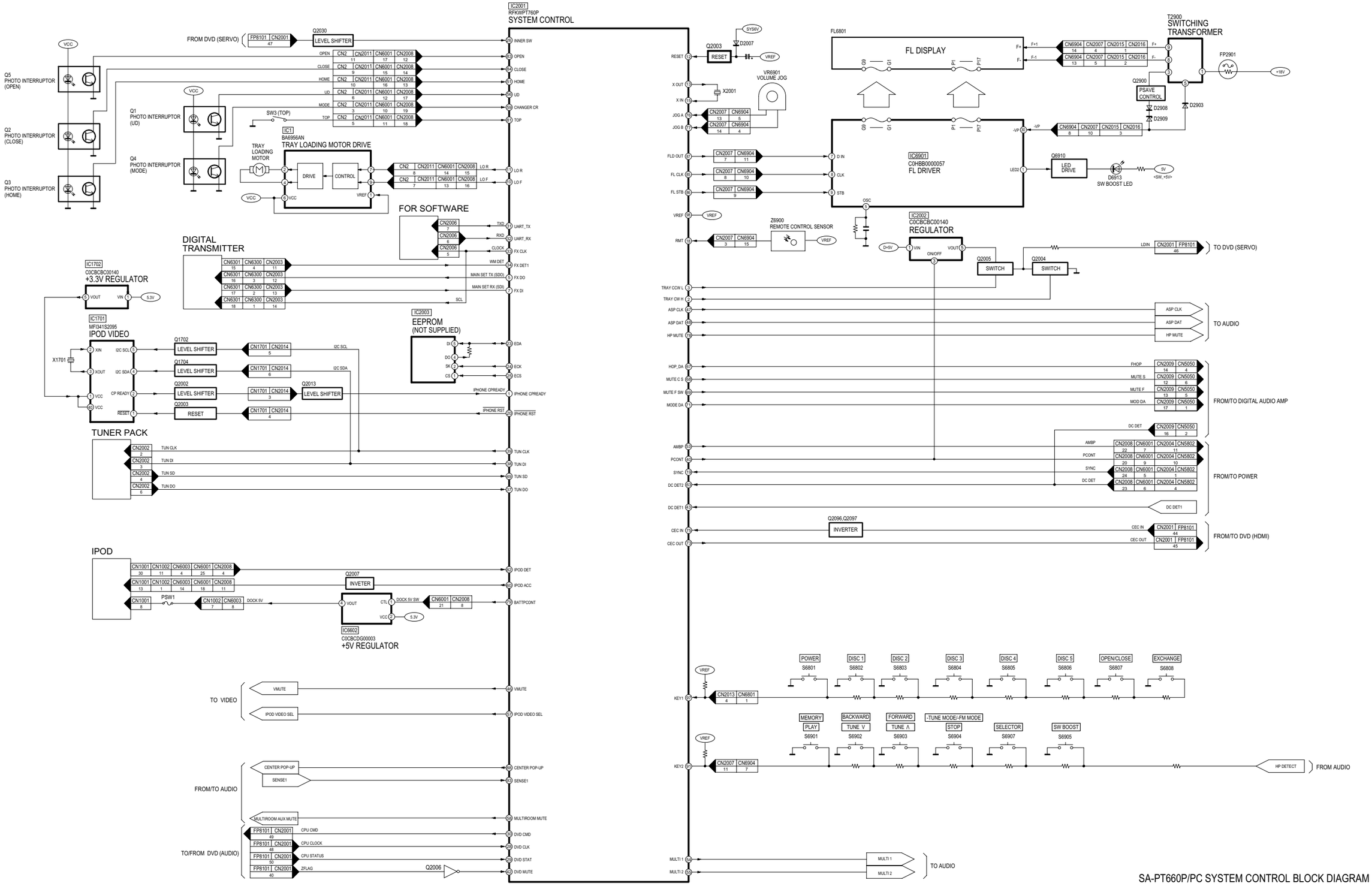


* FOR INDICATION ONLY

SA-PT660P/PC WIRING CONNECTION

17 Block Diagram

17.1. System Control

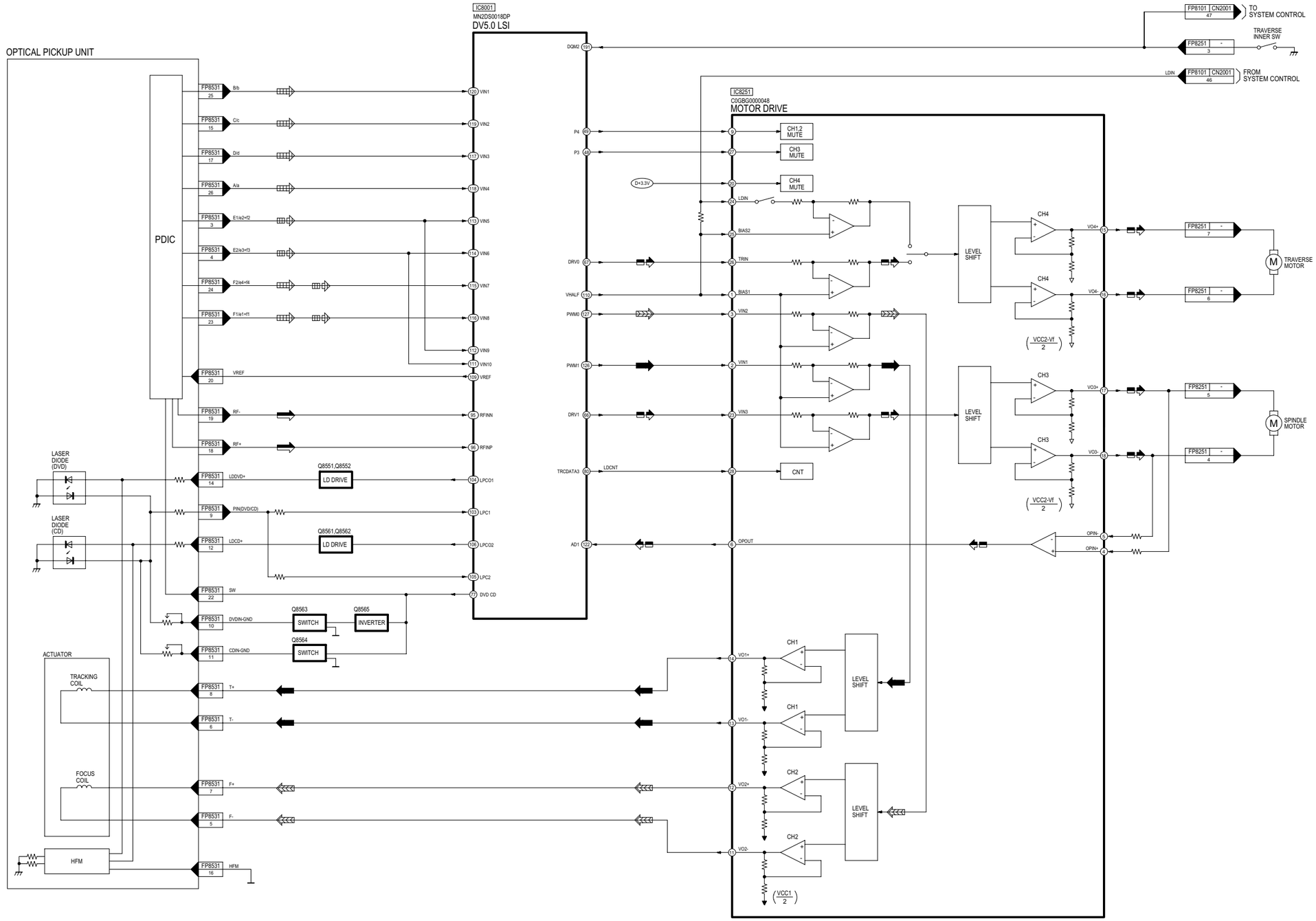


SA-PT660P/PC SYSTEM CONTROL BLOCK DIAGRAM

17.2. DVD (Servo)

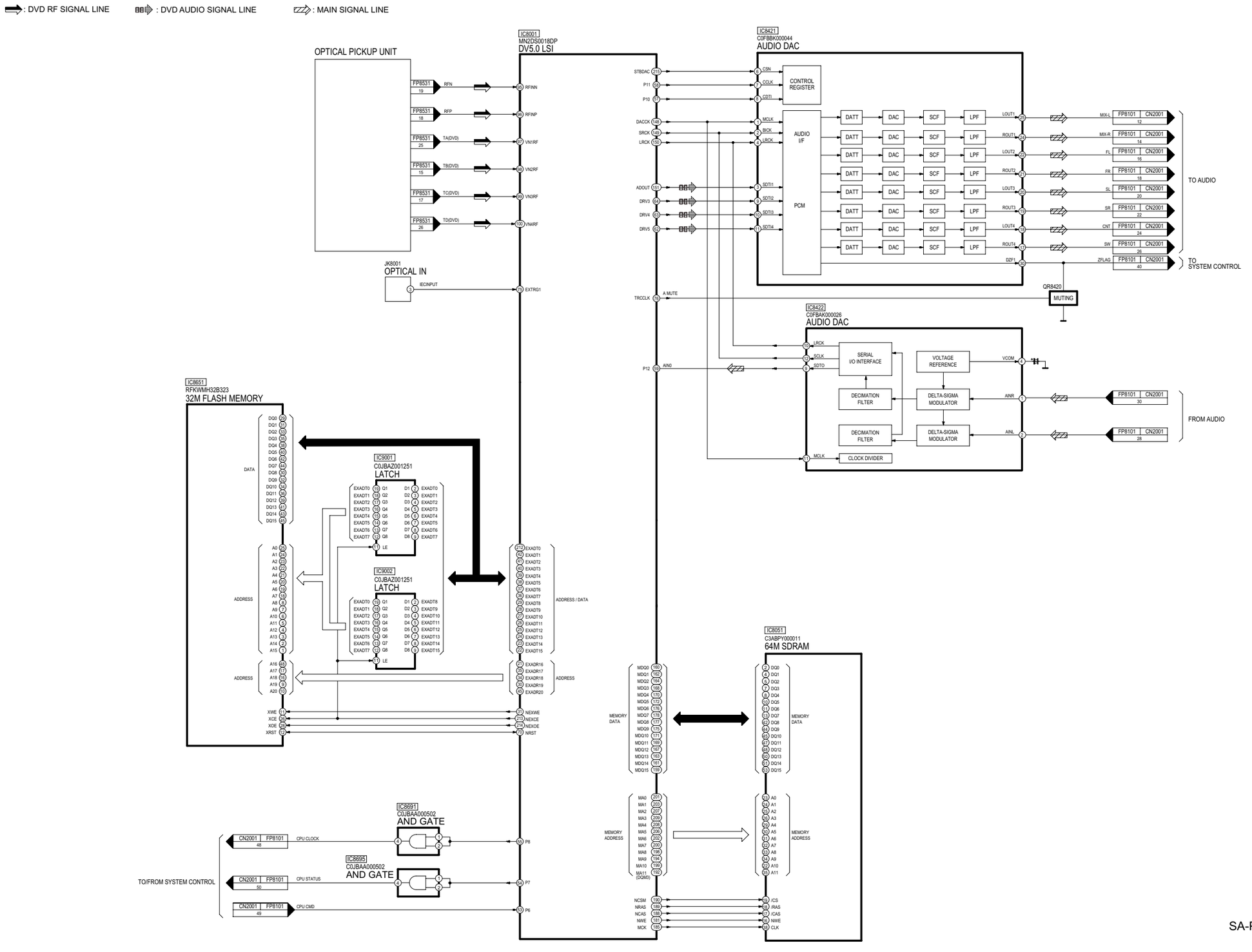
: CD HEAD SIGNAL LINE : DVD RF SIGNAL LINE : TRACKING ERROR SIGNAL LINE

: DVD HEAD SIGNAL LINE : MOTOR DRIVE SIGNAL LINE : FOCUS ERROR SIGNAL LINE



SA-PT660P/PC DVD (SERVO) BLOCK DIAGRAM

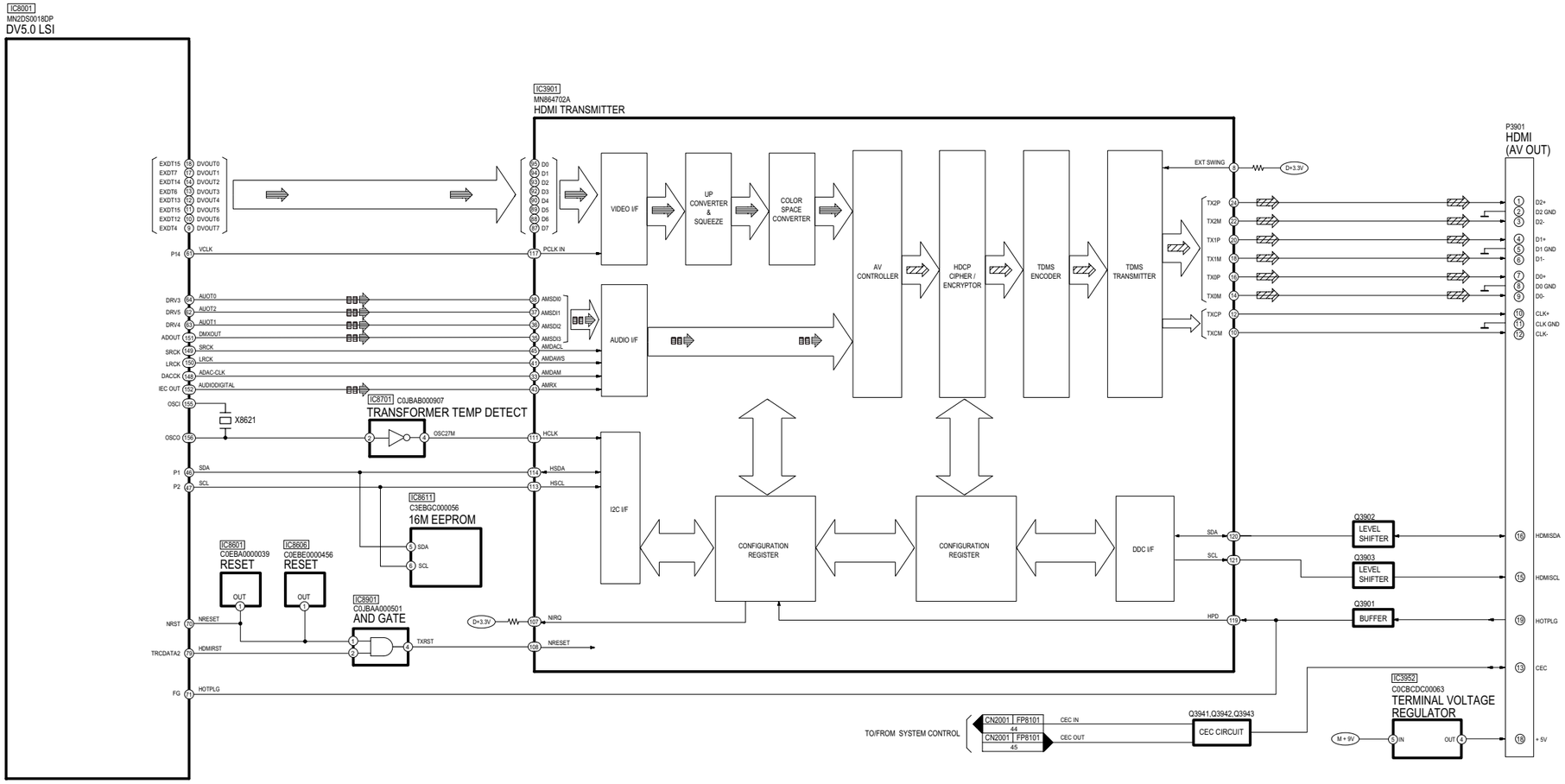
17.3. DVD (Audio)



SA-PT660P/PC DVD (AUDIO) BLOCK DIAGRAM

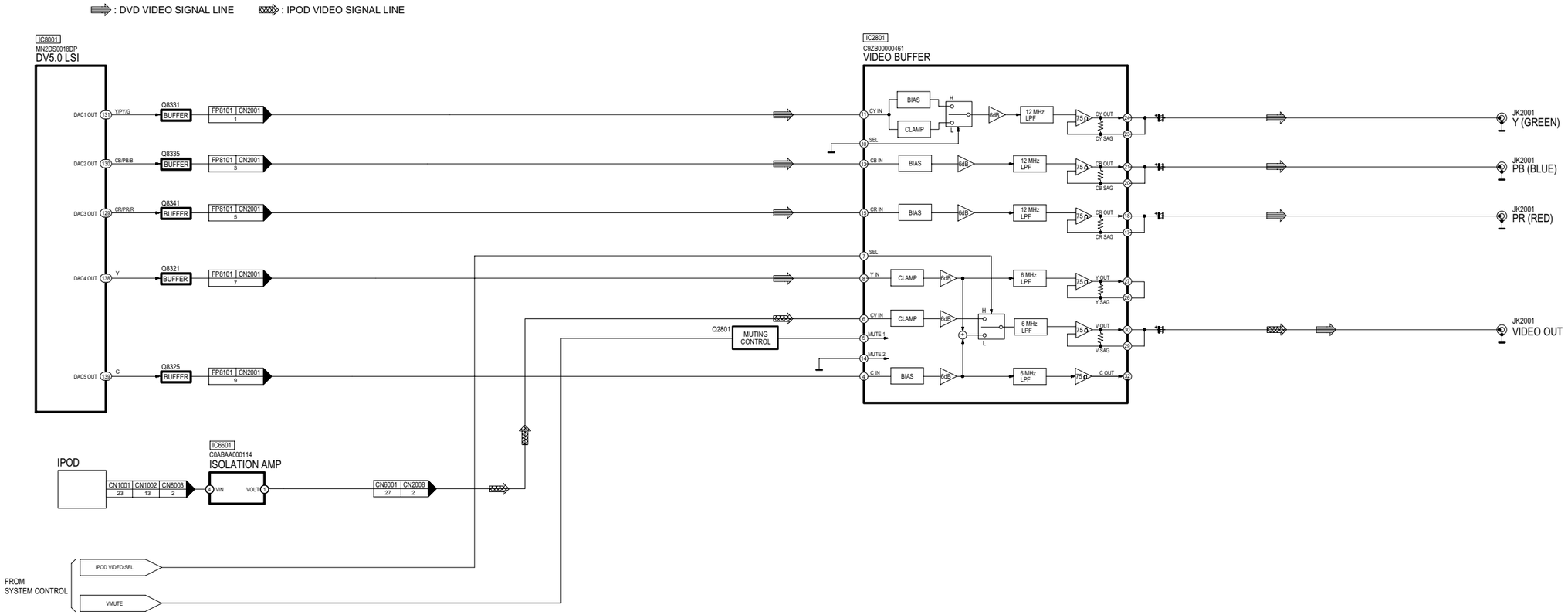
17.4. DVD (HDMI)

: DVD AUDIO SIGNAL LINE : DVD VIDEO SIGNAL LINE : MAIN SIGNAL LINE



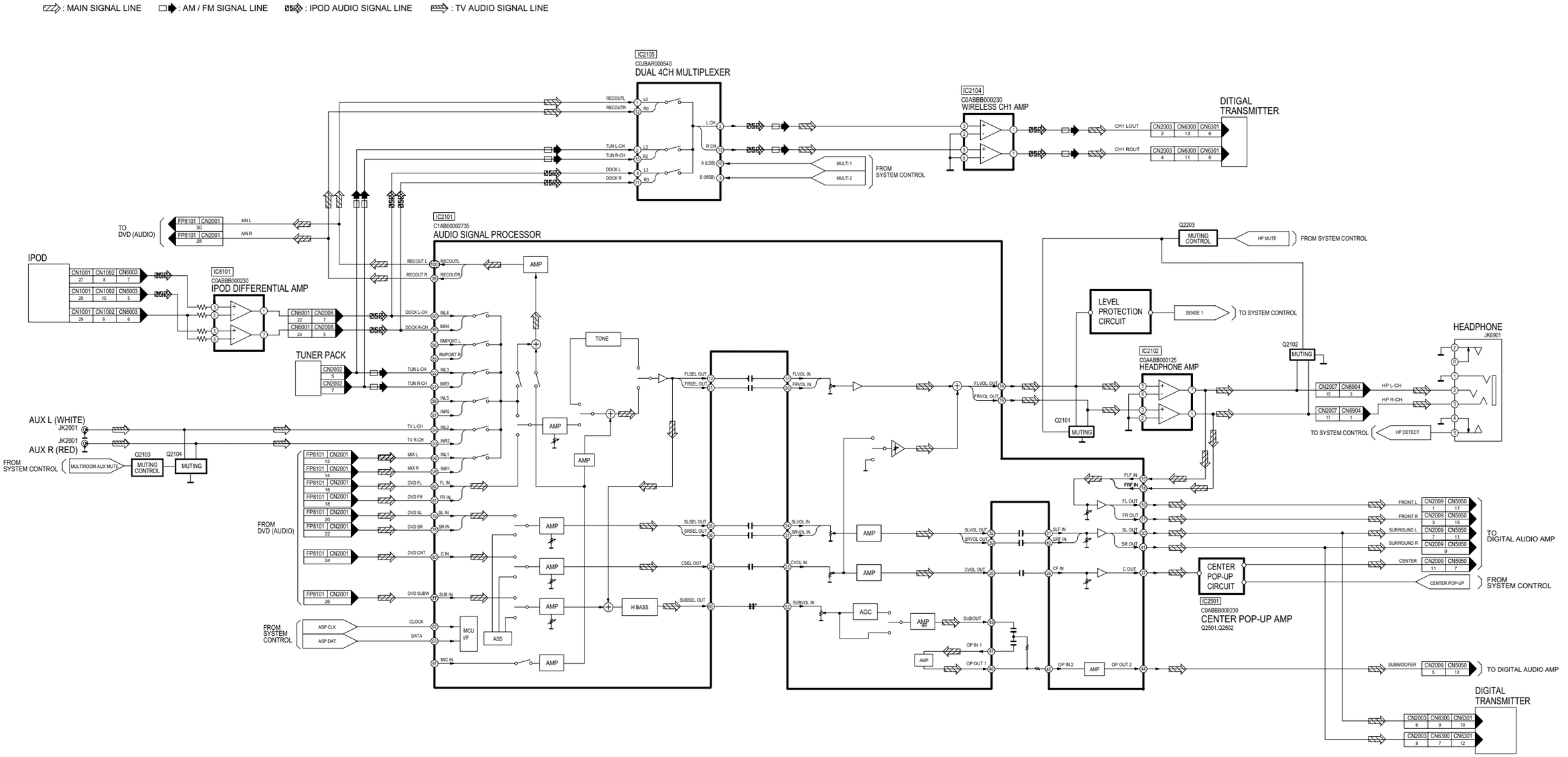
SA-PT660P/PC DVD (HDMI) BLOCK DIAGRAM

17.5. VIDEO



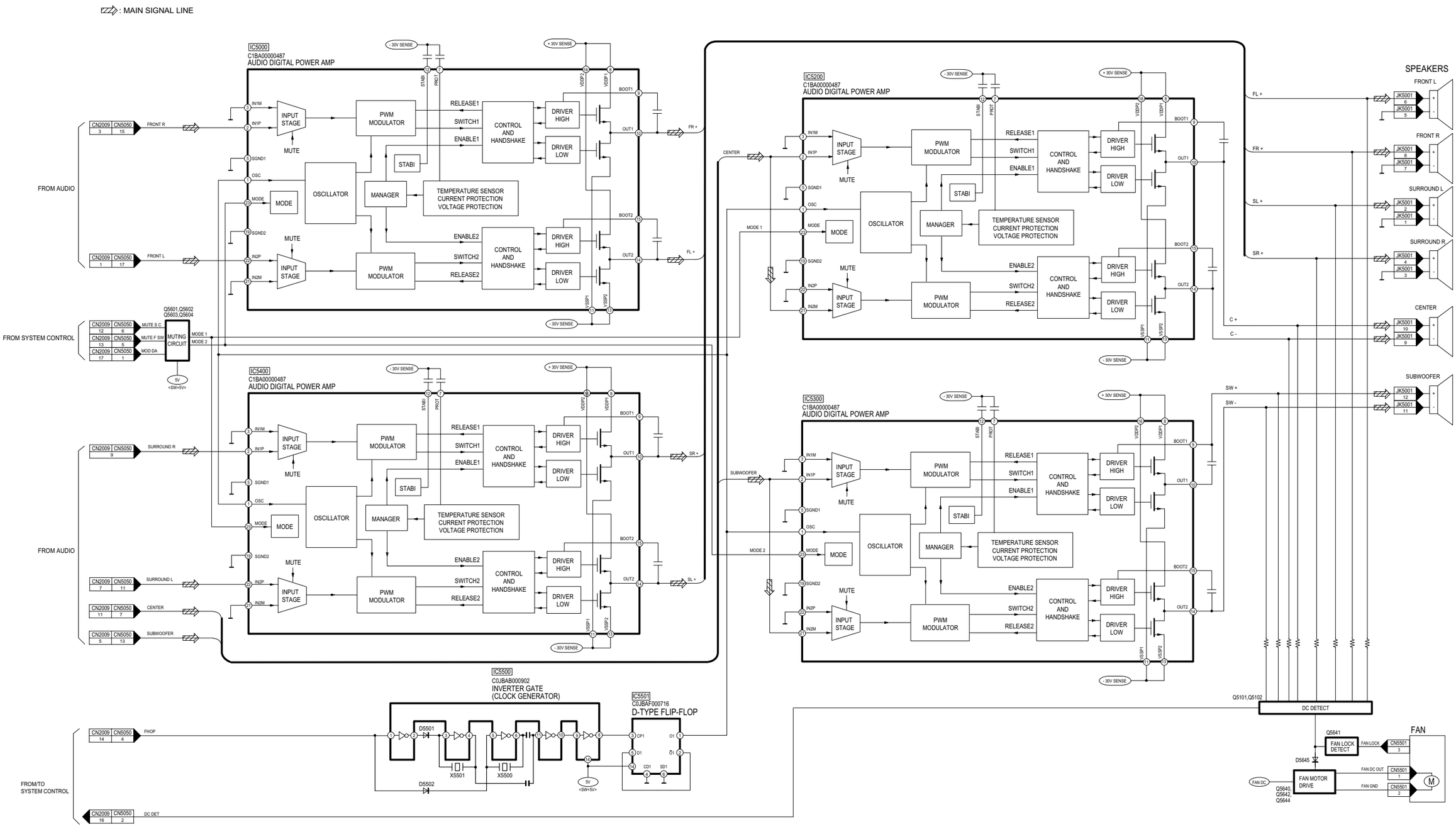
SA-PT660P/PC VIDEO BLOCK DIAGRAM

17.6. Audio



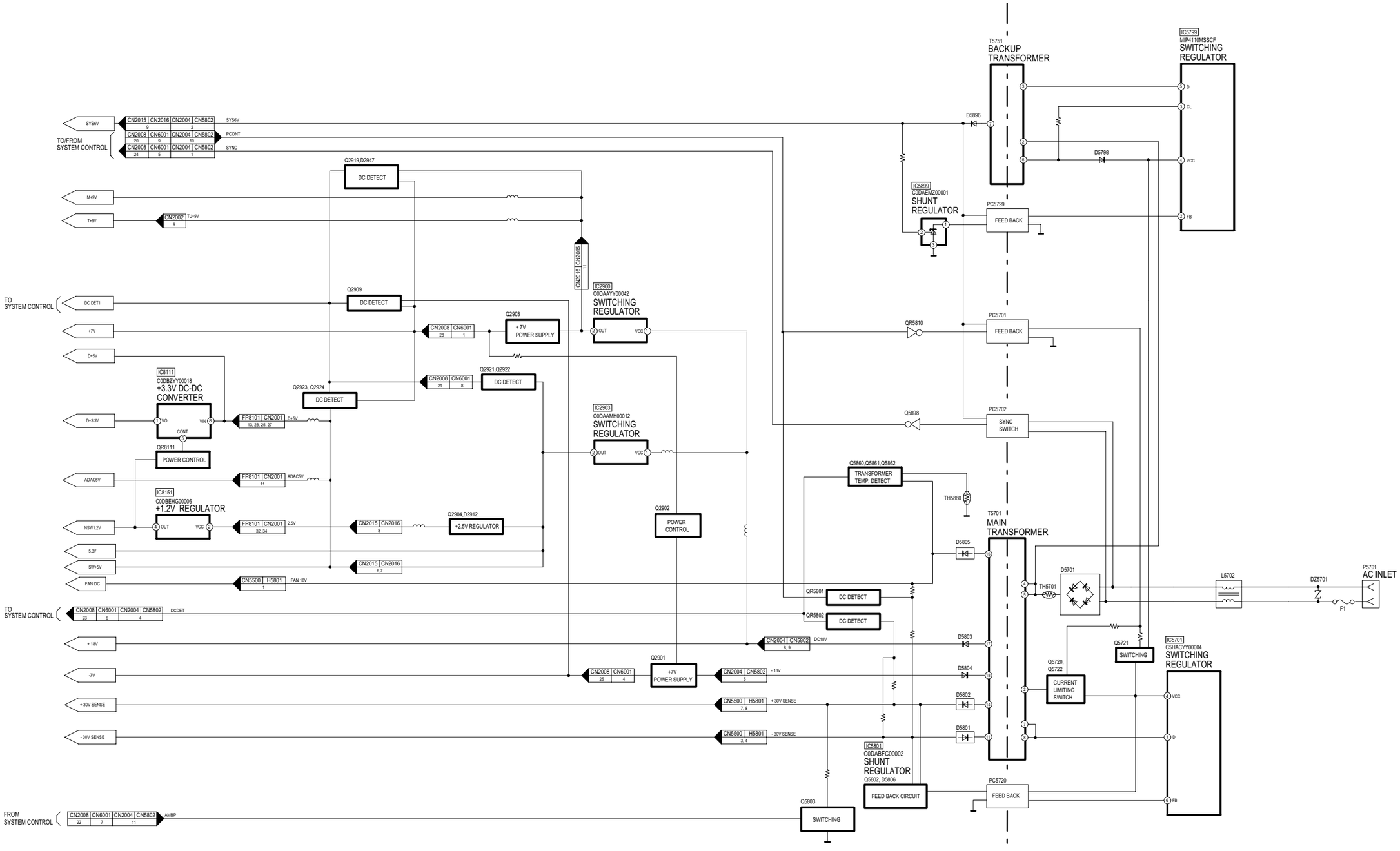
SA-PT660P/PC AUDIO BLOCK DIAGRAM

17.7. Digital Audio Amp



SA-PT660P/PC DIGITAL AUDIO AMP BLOCK DIAGRAM

17.8. Power



SA-PT660P/PC POWER BLOCK DIAGRAM

18 Schematic Diagram Notes

- **This schematic diagram may be modified at any time with the development of new technology.**

Notes:

S6801:	Power switch (POWER ⏻/I).
S6802-S6806:	DISC 1- DISC 5 switch (5 DISC SELECTOR)
S6807:	Open/Close switch (⏏ OPEN/CLOSE).
S6808:	Disc Exc switch
S6901:	Play/Memory switch (▶).
S6902:	Backward/Tune ⋁ switch (⏮/ ◀◀ ⋁)
S6903:	Forward/Tune ⋀ switch (⋀ ⏭/▶▶).
S6904:	Stop/-Tune mode/—FM mode switch (■ -TUNE/-FM MODE).
S6905:	SW Boost switch.
S6907:	Selector switch.
VR6901:	VR volume jog.

- Important safety notice:

  Components identified by ⚠ mark have special characteristics important for safety.

  Furthermore, special parts which have purposes of fire-retardant (resistors), high-quality sound (capacitors), low-noise (resistors), etc. are used.

  When replacing any of components, be sure to use only manufacturer´s specified parts shown in the parts list.

- In case of AC rated voltage Capacitor, the part no. and values will be indicated in the Schematic Diagram.

  AC rated voltage capacitor:

  C5700, C5701, C5703, C5704, C5705

- **Resistor**

  Unit of resistance is OHM [Ω] (K=1,000, M=1,000,000).

- **Capacitor**

  Unit of capacitance is µF, unless otherwise noted. F=Farad, pF=Pico-Farad

- **Coil**

  Unit of inductance is H, unless otherwise noted.

- *****

  For indication only.

- Voltage and signal line

  : +B signal line

  : -B signal line

  : DVD RF signal line

  : Motor Drive signal line

  : DVD Audio signal line

  : DVD Video signal line

  : CD Head signal line

  : DVD Head signal line

  : Main signal line

  : Tracking Error signal line

  : Focus Error signal line

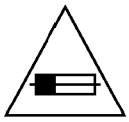
  : FM/AM signal line

  : Ipod Video signal line

  : Ipod Audio signal line

  : TV Audio signal line

CAUTION: FOR CONTINUED PROTECTION AGAINST FIRE HAZARD, REPLACE ONLY WITH SAME TYPE F1 8A 125V FUSE



RISK OF FIRE-REPLACE FUSE AS MARKED.

FUSE CAUTION

These symbols located near the fuse indicates that the fuse used is a fast operating type. For continued protection against fire harzard, replace with the same type fuse. For fuse rating, refer to the marking adjacent to the symbol.

Ce symbole indique que le fusible utilisé est à rapido. Pour une protection permanente, n' utiliser que des fusibles de même type. Ce dernier est indiqué là qù le présent symbole est apposé.

19 Schematic Diagram

19.1. DVD Module Circuit

SCHEMATIC DIAGRAM - 1

A DVD MODULE (DV5) CIRCUIT

: +B SIGNAL LINE
: CD HEAD SIGNAL LINE
: DVD HEAD SIGNAL LINE
: DVD RF SIGNAL LINE
: MOTOR DRIVE SIGNAL LINE
: DVD VIDEO SIGNAL LINE
: DVD AUDIO SIGNAL LINE
: FOCUS ERROR SIGNAL LINE
: TRACKING ERROR SIGNAL LINE
: MAIN SIGNAL LINE

DV: DVD MODULE (DV5): SCHEMATIC DIAGRAM 1 - 4
HD: DVD MODULE (HDMI): SCHEMATIC DIAGRAM - 5

IC8651
RFKWMH32B323
32M FLASH MEMORY

IC8001
MN2DS0018DP
DV5.0 LSI

JK8001
OPTICAL IN

TO DVD MODULE (DV5) SECTION (3/4)

TO DVD MODULE (DV5) SECTION (2/4)

1/4 | 2/4
3/4 | 4/4

SA-PT660P/PC
DVD MODULE (DV5) CIRCUIT

SCHEMATIC DIAGRAM - 2

A DVD MODULE (DV5) CIRCUIT

: +B SIGNAL LINE
: CD HEAD SIGNAL LINE
: DVD HEAD SIGNAL LINE
: DVD RF SIGNAL LINE
: MOTOR DRIVE SIGNAL LINE
: DVD VIDEO SIGNAL LINE
: DVD AUDIO SIGNAL LINE
: FOCUS ERROR SIGNAL LINE
: TRACKING ERROR SIGNAL LINE
: MAIN SIGNAL LINE

TO DVD MODULE (DV5) SECTION (1/4)

IC8422 C0FBAK000026 AUDIO DAC

IC8421 C0FBBK000044 AUDIO DAC

QR8420 UNR521100L MUTING

IC8701 C0JBAB000907 INVERTER GATE

IC8151 C0DBEHG00006 +1.2V REGULATOR

IC8691 C0JBAA000502 AND GATE

IC8695 C0JBAA000502 AND GATE

Q8325 2SB1218ARL BUFFER

Q8321 2SB1218ARL BUFFER

Q8331 2SB1218ARL BUFFER

Q8335 2SB1218ARL BUFFER

Q8341 2SB1218ARL BUFFER

FP8101

TO B MAIN CIRCUIT (CN2001) IN SCHEMATIC DIAGRAM - 8

DV: DVD MODULE (DV5): SCHEMATIC DIAGRAM 1 - 4
HD: DVD MODULE (HDMI): SCHEMATIC DIAGRAM - 5

TO DVD MODULE (DV5) SECTION (4/4)

1/4	2/4
3/4	4/4

SA-PT660P/PC
DVD MODULE (DV5) CIRCUIT

SCHEMATIC DIAGRAM - 3

A DVD MODULE (DV5) CIRCUIT

: +B SIGNAL LINE
: CD HEAD SIGNAL LINE
: DVD HEAD SIGNAL LINE
: DVD RF SIGNAL LINE
: MOTOR DRIVE SIGNAL LINE
: DVD VIDEO SIGNAL LINE
: DVD AUDIO SIGNAL LINE
: FOCUS ERROR SIGNAL LINE
: TRACKING ERROR SIGNAL LINE
: MAIN SIGNAL LINE

TO DVD MODULE (DV5) SECTION (1/4)

IC9001 C0JBAZ001251 LATCH

IC9002 C0JBAZ001251 LATCH

IC8611 C3EBGC000056 16M EEPROM

IC8601 C0EBA0000039 RESET

IC8606 C0EBE0000456 RESET

IC8901 C0JBAA000501 AND GATE

IC8051 C3ABPY000011 64M SDRAM

TO DVD MODULE (DV5) SECTION (4/4)

DV: DVD MODULE (DV5): SCHEMATIC DIAGRAM 1 - 4
HD: DVD MODULE (HDMI): SCHEMATIC DIAGRAM - 5

1/4	2/4
3/4	4/4

SA-PT660P/PC
DVD MODULE (DV5) CIRCUIT

SCHEMATIC DIAGRAM - 4

A DVD MODULE (DV5) CIRCUIT

: +B SIGNAL LINE
: CD HEAD SIGNAL LINE
: DVD HEAD SIGNAL LINE
: DVD RF SIGNAL LINE
: MOTOR DRIVE SIGNAL LINE
: DVD VIDEO SIGNAL LINE
: DVD AUDIO SIGNAL LINE
: FOCUS ERROR SIGNAL LINE
: TRACKING ERROR SIGNAL LINE
: MAIN SIGNAL LINE

TO DVD MODULE (DV5) SECTION (3/4)

TO DVD MODULE (DV5) SECTION (2/4)

IC8111 C0DBZYY00018 +3.3V DC-DC CONVERTER

QR8111 XP0621400L POWER CONTROL

IC8251 C0GBG0000048 MOTOR DRIVE

Q8561 2SD1819A0L LD DRIVE

Q8562 B1ADGB000008 LD DRIVE

Q8551 2SD1819A0L LD DRIVE

Q8552 B1ADGB000008 LD DRIVE

Q8563 B1CFHA000002 SWITCH

Q8564 B1CFHA000002 SWITCH

Q8565 2SD1819A0L INVERTER

FP8251

1	DGND
2	UNLOAD_SW
3	INNER_SW
4	SP-
5	SP+
6	TR-
7	TR+

TO TRAVERSE / SPINDLE

FP8531

1	NC
2	VCC
3	E1/e2+f2
4	E2/e3+f3
5	F-
6	T-
7	F+
8	T+
9	PIN(DVD/CD)
10	DVDIN-GND
11	CDIN-GND
12	LDCD+
13	LDGND
14	LDDVD+
15	C/c
16	HFM
17	D/d
18	RF+
19	RF-
20	VREF
21	PD GND
22	SW
23	F1/e1+F1
24	F2/e4+f4
25	B/b
26	A/a

TO OPTICAL PICKUP UNIT

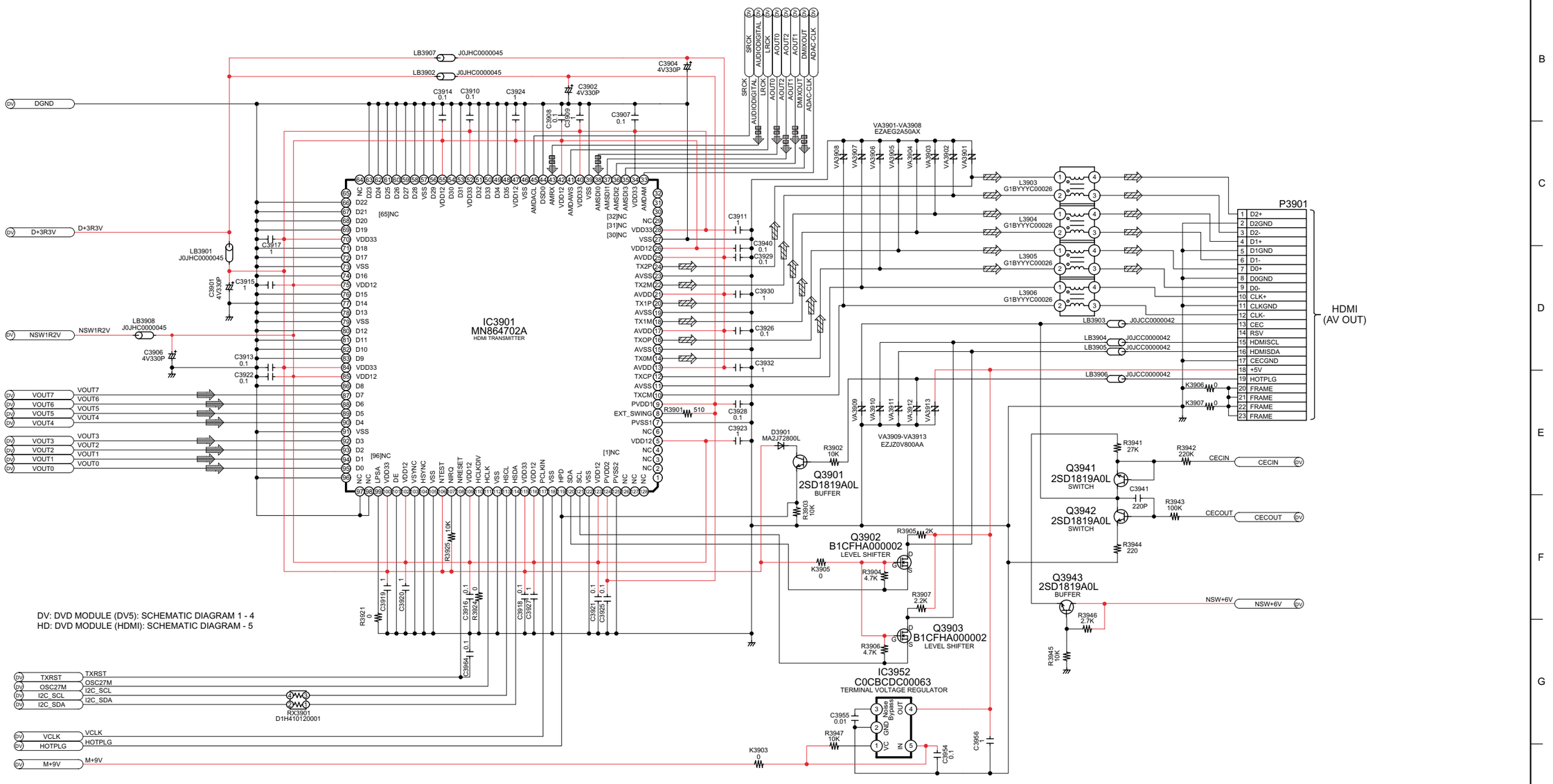
DV: DVD MODULE (DV5): SCHEMATIC DIAGRAM 1 - 4
HD: DVD MODULE (HDMI): SCHEMATIC DIAGRAM - 5

1/4	2/4	SA-PT660P/PC	
3/4	4/4	DVD MODULE (DV5) CIRCUIT	

SCHEMATIC DIAGRAM - 5

A DVD MODULE (HDMI) CIRCUIT

: +B SIGNAL LINE : DVD AUDIO SIGNAL LINE : DVD VIDEO SIGNAL LINE : MAIN SIGNAL LINE



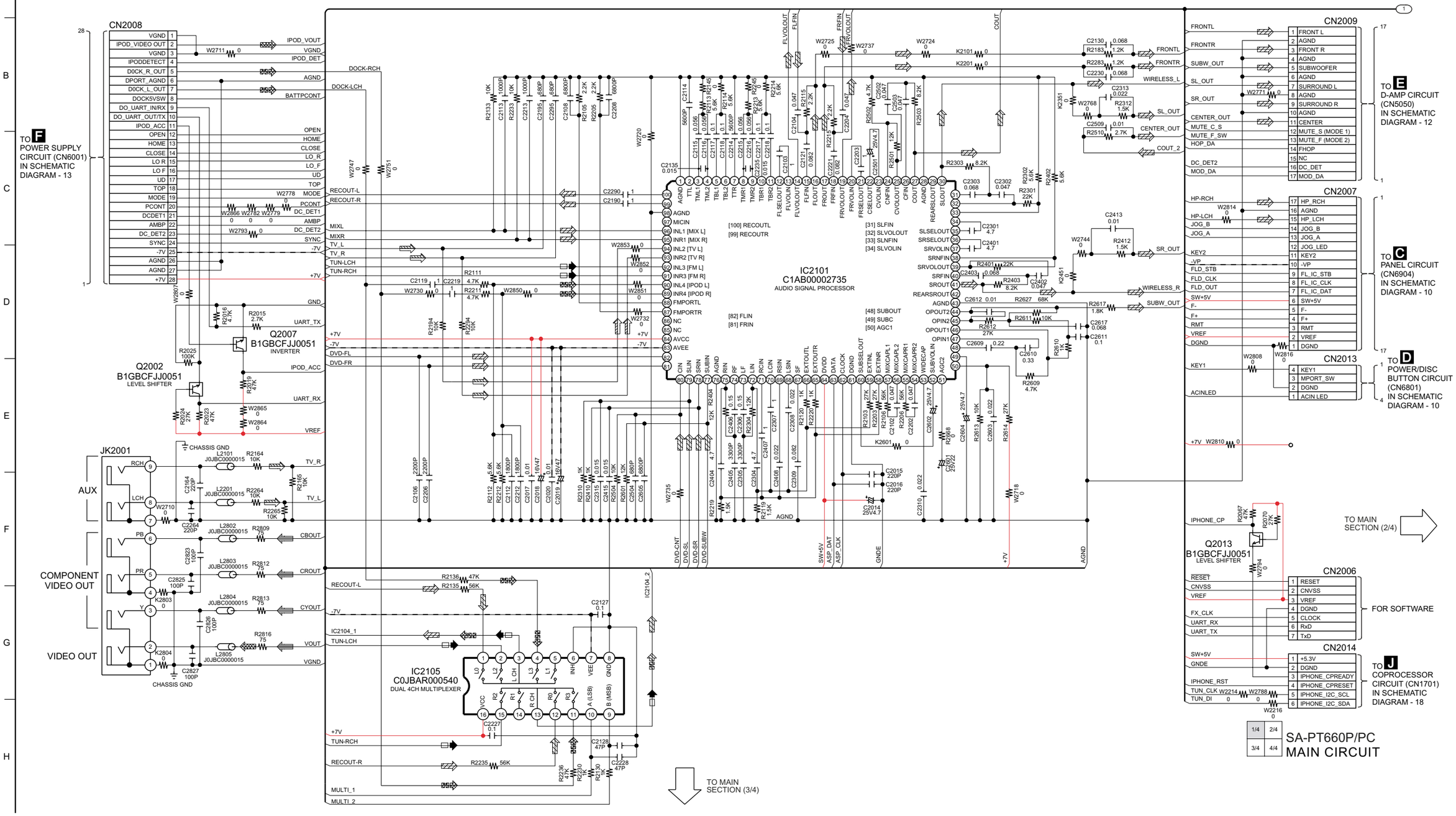
SA-PT660P/PC DVD MODULE (HDMI) CIRCUIT

19.2. Main Circuit

SCHEMATIC DIAGRAM - 6

B MAIN CIRCUIT

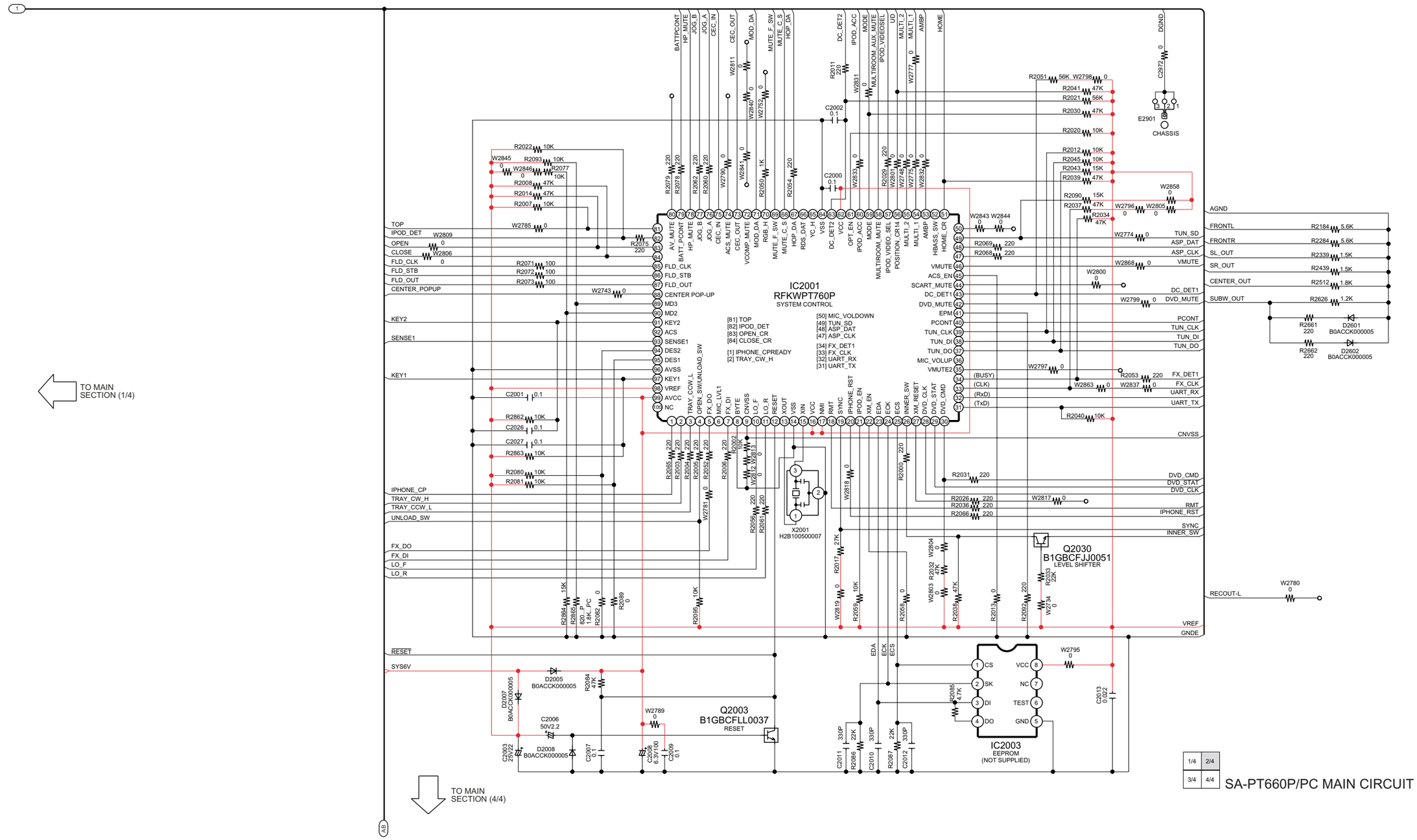
: +B SIGNAL LINE : -B SIGNAL LINE : MAIN SIGNAL LINE : DVD VIDEO SIGNAL LINE : IPOD VIDEO SIGNAL LINE : IPOD AUDIO SIGNAL LINE : TV AUDIO SIGNAL LINE : AM / FM SIGNAL LINE



SCHEMATIC DIAGRAM - 7

B MAIN CIRCUIT

: +B SIGNAL LINE : -B SIGNAL LINE : MAIN SIGNAL LINE : DVD VIDEO SIGNAL LINE : IPOD VIDEO SIGNAL LINE : IPOD AUDIO SIGNAL LINE : TV AUDIO SIGNAL LINE : AM / FM SIGNAL LINE



SCHEMATIC DIAGRAM - 8

B MAIN CIRCUIT

: +B SIGNAL LINE : -B SIGNAL LINE : MAIN SIGNAL LINE : DVD VIDEO SIGNAL LINE : IPOD VIDEO SIGNAL LINE : IPOD AUDIO SIGNAL LINE : TV AUDIO SIGNAL LINE : AM / FM SIGNAL LINE

TO MAIN SECTION (1/4)

CN2001
DOP_CPU_STAT 50
DOP_CPU_CMD 49
DOP_CPU_CLK 48
INNER_SW 47
LDIN 46
CECOUT 45
CECIN 44
OPEN_SW 43
AUDIODIGITAL 42
NSW+6V 41
ZFLAG&AMUTE 40
MGND 39
M+9V 38
MGND 37
M+9V 36
DGND 35
D+2.5V 34
DGND 33
D+2.5V 32
DGND 31
A_RCH 30
DGND 29
A_LCH 28
D+5V 27
SW 26
D+5V 25
CNT 24
D+5V 23
SR 22
ADGND 21
SL 20
ADGND 19
FR 18
ADGND 17
FL 16
ADGND 15
MIX-R 14
D+5V 13
MIX-L 12
ADAC5V 11
VGND 10
C 9
VGND 8
Y 7
VGND 6
CR/PR/R 5
VGND 4
CB/PB/B 3
VGND 2
Y/PY/G 1

TO A DVD MODULE (DV5) CIRCUIT (FP8101) IN SCHEMATIC DIAGRAM - 2

CN2002*
TUNERGND 10
T+9V 9
RDS DETECT 8
TUNER RCH 7
TUNER DO/ST 6
TUNER LCH 5
TUNER SD 4
TUNER DI 3
TUNER CLK 2
PORT_SEL 1

TO TUNER PACK (ENG06842QRF)

CHASSIS

CEC_OUT
SYS6V
DC_DET1
CEC_IN
Q2097 2SD0601AHL INVERTER
Q2096 2SD0601AHL INVERTER
DVD_STAT
DVD_CMD
DVD_CLK
INNER_SW
UNLOAD_SW
SYS6V
MGND
M+9V
DVD_2R5
DVD_D+5V
DVD_MUTE
DGND
RECOUT-R
RECOUT-L
DVD_D+5V
DVD-SUBW
DVD-CNT
DVD-SR
DVD-SL
DVD-FR
DVD-FL
ADGND
MIXR
MIXL
DVD_ADAC+5V
Y
CR
CB
VGND
PY
TU+9V
TUN-RCH
TUN_DO
TUN-LCH
TUN_SD
TUN_DI
TUN_CLK
AGND

Q2006 B1GBCFJN0033 INVERTER

IC2002 C0CBCBC00140 REGULATOR
Q2005 B1ADCE000012 SWITCH
Q2004 2SD0601AHL SWITCH
TRAY_CW_H
TRAY_CCW_L
PCONT

Q2924 B1GBCFJJ0051 DC DETECT
Q2923 B1GBCFJJ0051 DC DETECT
Q2909 B1ABCF000176 DC DETECT
Q2919 B1ABCF000176 DC DETECT

IPOD_VOUT
IPOD_VIDEOSEL
VIDEO_+5V
VMUTE

IC2801 C9ZB00000461 VIDEO BUFFER
Q2801 B1GBCFJN0033 MUTING CONTROL

VOUT
CYOUT
CBOUT
CROUT

SW+5V
TU+9V
RF+5V
5V_GND
DVD_ADAC+5V
ADGND
DVD_D+5V
DGND
DVD_2R5
M+9V
MGND

IC2501 C0ABBB000230 CENTER POP-UP AMP
+VCC
-VCC
CENTER_POPUP
Q2502 B1GBCFLL0037 SWITCH
Q2501 B1GBCFLL0037 SWITCH

COUT
COUT_2
AGND
GND
GNDE
SYS6V

CN2015*
F+
F-
-VP
GND
GND
+5.3V
+5.3V
DVD_2R5
SYS6V
SYS6VGND
+9V
MGND
+18V

TO F POWER SUPPLY CIRCUIT (CN2016) IN SCHEMATIC DIAGRAM - 13

TO MAIN SECTION (4/4)

1/4	2/4
3/4	4/4

SA-PT660P/PC MAIN CIRCUIT

SCHEMATIC DIAGRAM - 9

B MAIN CIRCUIT

—— : +B SIGNAL LINE ---- : -B SIGNAL LINE : MAIN SIGNAL LINE : DVD VIDEO SIGNAL LINE : IPOD VIDEO SIGNAL LINE : IPOD AUDIO SIGNAL LINE : TV AUDIO SIGNAL LINE : AM / FM SIGNAL LINE

TO MAIN SECTION (2/4)

TO MAIN SECTION (3/4)

TO K WIRELESS ADAPTER CIRCUIT (CN6300) IN SCHEMATIC DIAGRAM - 18

CN2003

AGND	1	
CH1_L_OUT	2	
AGND	3	
CH1_R_OUT	4	
AGND	5	
CH2_L_OUT	6	
AGND	7	
CH2_R_OUT	8	
5V	9	
5V_GND	10	
WM_DET	11	
MAINSET TX(SDO)	12	
MAINSETRX(SDI)	13	
SCL	14	

Q2203 B1GDCFGA0018 MUTING CONTROL

Q2101 B1HBECA00004 MUTING

Q2102 B1HBECA00004 MUTING

IC2102 C0AABB000125 HEADPHONE AMP

Q2104 B1HBECA00004 MUTING

IC2104 C0ABBB000230 WIRELESS CH1 AMP

Q2103 B1GDCFGA0018 MUTING CONTROL

K7 0

K12...P 0

K13...PC 0

R2871 0...P 220...PC

1/4	2/4
3/4	4/4

SA-PT660P/PC MAIN CIRCUIT

19.3. Panel, Power/Disc Button Circuit

SCHEMATIC DIAGRAM - 10

C PANEL CIRCUIT

: +B SIGNAL LINE : -B SIGNAL LINE : MAIN SIGNAL LINE

JK6901
HEADPHONE
R6910 0
L6910 J0JBC0000019 L-CH
L6920 J0JBC0000019 R-CH
C6841 0.047
C6951 0.047
C6901 0.1
R6901 0
R6902 2.7K
W6708 0
L6901 J0JBC0000019
C6931 0.01
CHASSIS
R6960 2.2K
R6912 1.8K
R6903 1.2K
R6904 1K
R6905 1K
W6129 0
W6128 0
S6905 SW BOOST
S6907 SELECTOR
S6904 STOP / -TUNE MODE / -FM MODE
S6903 FORWARD / TUNE ^
S6902 BACKWARD / TUNE v
S6901 PLAY / MEMORY
W6702 0

CN6904
HP-RCH 1
AGND 2
HP-LCH 3
JOG_B 4
JOG_A 5
JOG_LED 6
KEY2 7
-VP 8
FL_IC_STB 9
FL_IC_CLOCK 10
FL_IC_DATA 11
SW_+5V 12
F- 13
F+ 14
RMT 15
VREF 16
DGND 17
TO B MAIN CIRCUIT (CN2007) IN SCHEMATIC DIAGRAM - 6

HP-RCH1
HP-LCH1
JOG_B
JOG_A
KEY2
-VP1
FL_IC_STB
FL_IC_CLK
FL_IC_IN
SW_+5V
F-1
F+1
RMT1
VREF

W6705 0
VR6901 EVEKE2F2524B VOLUME JOG
R6909 22K
R6907 22K
W6700 0
W6709 0
C6907 100P
C6902 100P

Z6900 B3RAD0000146 REMOTE CONTROL SENSOR
R6934 47
W6701 0
W6703 0
W6704 0
C6918 16V10
W6718 0

F-1
F+1
R6939 1.2
R6940 1.2
R6935
D6910 B0BDCR4A0006
C6905 50V10
C6903 50V10
L6903 J0JBC0000019
R6918 22K

FL6801
A2BB00000169
FL DISPLAY
F2

W6713 0
W6712 0
R6914 56K
C6906 100P
W6714 0
W6717 0
R6927 68
R6916 68
R6917 68
FL_IC_IN
FL_IC_CLK
FL_IC_STB

IC6901
C0HBB0000057
FL DRIVER
GND 1
LED3 2
LED4 3
LED5 4
OSC 5
DOUT 6
DIN 7
CLK 8
STB 9
K1 10
GND 11
VCC 12
[1] LED2
[11] K2
[34] G2
[23] P9
C6925 0.01
C6909 0.01

SW+5V1
R6919 47
R6920 47
W6710 0
W6716 0
W6715 0
R6961 330
D6913 B3ADK0000397
Q6910 B1GBCFJN0033 LED DRIVE
C6917 100P
C6916 100P
C6919 100P
C6913 50V3.3
C6911 0.01
D6911 B0BC5R000009
C6910 6.3V100
W6720 0
W6719 0
W6707 0

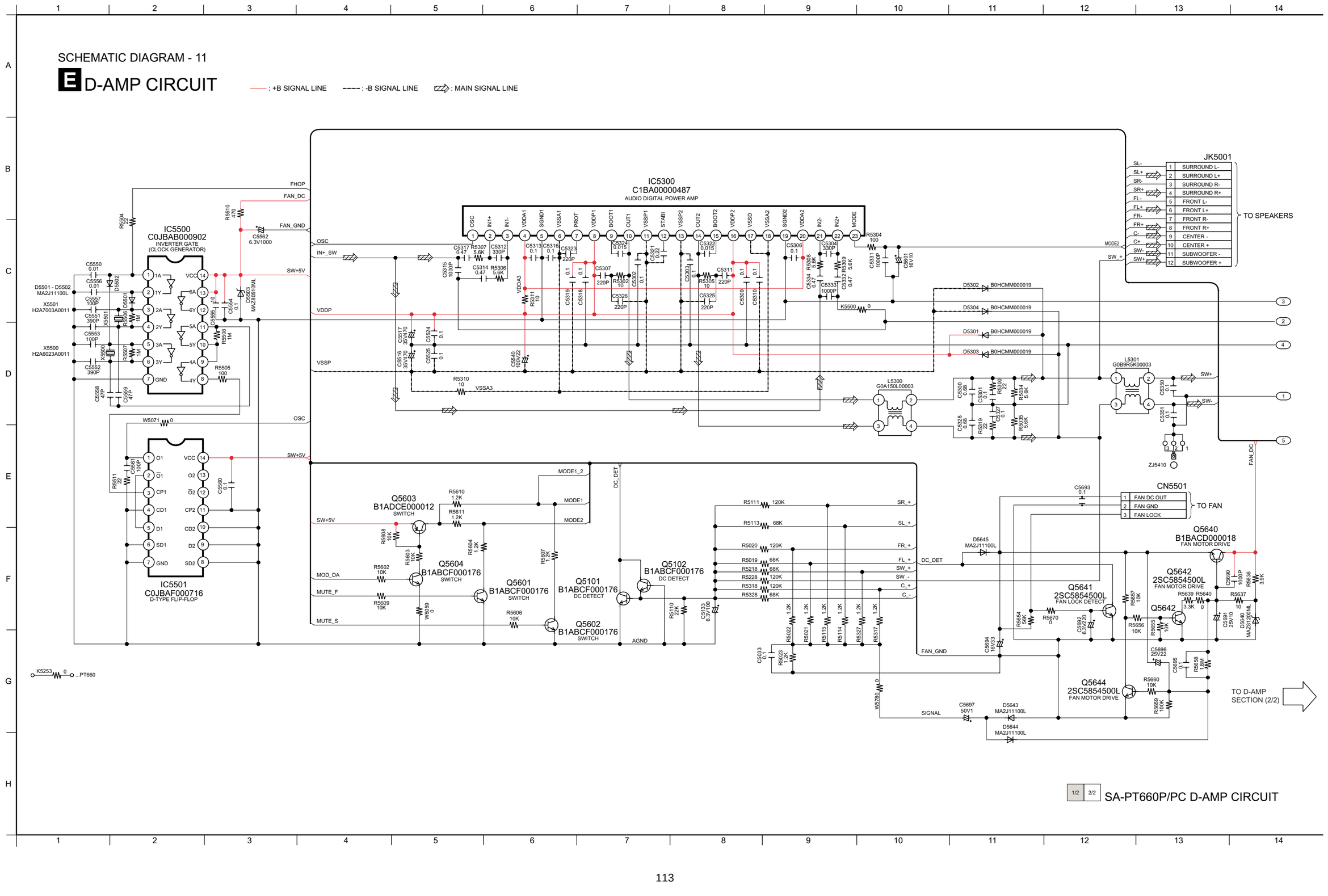
D POWER/DISC BUTTON CIRCUIT

CN6801
1 KEY1
2 MPORT_SW
3 DGND
4 ACIN LED
TO B MAIN CIRCUIT (CN2013) IN SCHEMATIC DIAGRAM - 6

R6808 0
R6807 4.7K
W7300 0
R6806 2.7K
R6805 2.2K
R6804 1.8K
R6803 1.2K
R6802 1K
R6801 1K
S6808 DISC EXC
S6807 OPEN / CLOSE
S6806 DISC 5
S6805 DISC 4
S6804 DISC 3
S6803 DISC 2
S6802 DISC 1
S6801 POWER

SA-PT660P/PC PANEL / POWER/DISC BUTTON CIRCUIT

19.4. D-Amp Circuit



SCHEMATIC DIAGRAM - 12

E D-AMP CIRCUIT

: +B SIGNAL LINE : -B SIGNAL LINE : MAIN SIGNAL LINE

IC5000
C1BA00000487
AUDIO DIGITAL POWER AMP

IC5400
C1BA00000487
AUDIO DIGITAL POWER AMP

IC5200
C1BA00000487
AUDIO DIGITAL POWER AMP

CN5500
TO G SMPS CIRCUIT (H5801*) IN SCHEMATIC DIAGRAM - 15

CN5050
TO B MAIN CIRCUIT (CN2009) IN SCHEMATIC DIAGRAM - 6

TO D-AMP SECTION (1/2)

1/2 2/2 SA-PT660P/PC D-AMP CIRCUIT

19.5. Power Supply Circuit

SCHEMATIC DIAGRAM - 13

F POWER SUPPLY CIRCUIT

: +B SIGNAL LINE : -B SIGNAL LINE : IPOD AUDIO SIGNAL LINE : IPOD VIDEO SIGNAL LINE

CN2016
F+ 1
F- 2
-VP 3
GND 4
GND 5
5.3V 6
5.3V 7
DVD_2R5 8
SYS6V 9
SYS6VGND 10
9V 11
MGND 12
+18V 13
TO B MAIN CIRCUIT (CN2015*) IN SCHEMATIC DIAGRAM - 8

CN2004*
SYNC 1
SYS6V 2
SYS6VGND 3
DC_DET 4
-13V 5
GND 6
GND 7
+18V 8
+18V 9
PCONT 10
AMBP 11
TO G SMPS CIRCUIT (CN5802) IN SCHEMATIC DIAGRAM - 15

CN6001
+7V 1
AGND 2
AGND 3
-7V 4
SYNC 5
DC_DET2 6
AMBP 7
DCDET1 8
PCONT 9
MODE 10
TOP 11
UD 12
LO F 13
LO R 14
CLOSE 15
HOME 16
OPEN 17
ACC_PWR 18
DO_UART_OUT/TX 19
DO_UART_IN/RX 20
DOCK5VSW 21
DOCK_L_OUT 22
DPORT_AGND 23
DOCK_R_OUT 24
IPOD DETECT 25
VGND 26
IPOD_VIDEO OUT 27
VGND 28
TO B MAIN CIRCUIT (CN2008) IN SCHEMATIC DIAGRAM - 6

CN2011
OPEN 11
HOME 10
CLOSE 9
LO R 8
LO F 7
UD 6
TOP 5
DGND 4
MODE 3
PGND 2
VCC 1
TO CR14 (CN2)

W6409 0
W6408 0
W6406 0
W6226 0
R2010 1K
R2977 1
L2913 G0A220GA0026
C2905 16V100
L2909 G0A100HA0023
C2919 16V220
D2002 B0EAKM000117
D2003 B0EAKM000117
9V
MGND
5.3V
+7V
DOCK5V_GND
+9V
MGND

D2909 MAZ82400HL
D2908 B0EAMM000057
D2903 B0EAMM000057
D2906 B0JAME000029
R2914 47K
C2903 35V33
C2912 16V100
T2900 G4D1A0000117 SWITCHING TRANSFORMER
D2901 B0BC035A0007
Q2900 B1BABK000001 PSAVE CONTROL
R2902 47
C2902 3900P
R2900 5.6K
C2903 35V33
L2910 G0A220GA0026
FP2901 0.4A

Q2904 B1BACG000023 +2.5V REGULATOR
R2915 1.5
C2915 0.1
R2946 33
R2936 470
C2916 16V100
D2912 B0BC3R400001
Q2922 B1GBCFJJ0051 DC DETECT
R2913 1.5
C2975 0.1
R2975 15K
R2976 10K
Q2921 B1ADCF000001 DC DETECT

Q2901 B1BCCG000002 -7V POWER SUPPLY
C2909 10V33
R2912 2.7K
C2907 0.01
R2911 3.9K
R2954 47
R2910 47
Q2902 B1ADCF000001 POWER CONTROL
R2907 2.7K
R2908 560
C2908 16V100
Q2903 B1BACG000023 +7V POWER SUPPLY
C2906 16V100
C2910 0.01
R2985 39
R2952 3.9K
R2953 560

R2935 4.7K
IC2903 C0DAAMH00012 SWITCHING REGULATOR
STBY 5 INV 4 GND 3 OUT 2 VCC 1
+5.3V
L2902 G0A101ZA0028
R2921 390
C2922 6.3V820
D2904 B0JCPD000025
R2920 3.3K
R2919 1K
C2924 1000P
C2939 0.01
L2911 G0A200D00002
C2965 25V220
L2901 G0A220GA0026
C2901 25V1000
E2900
R2930 4.7K
IC2900 C0DAAYY00042 SWITCHING REGULATOR
STBY 5 INV 4 GND 3 OUT 2 VCC 1
L2903 G0A101ZA0028
D2951 B0BC010A0007
C2930 10V680
D2913 B0JCPD000025
R2923 1.2K
R2906 6.8K
R2922 1K
C2929 0.01
C2927 0.01
C2923 25V220

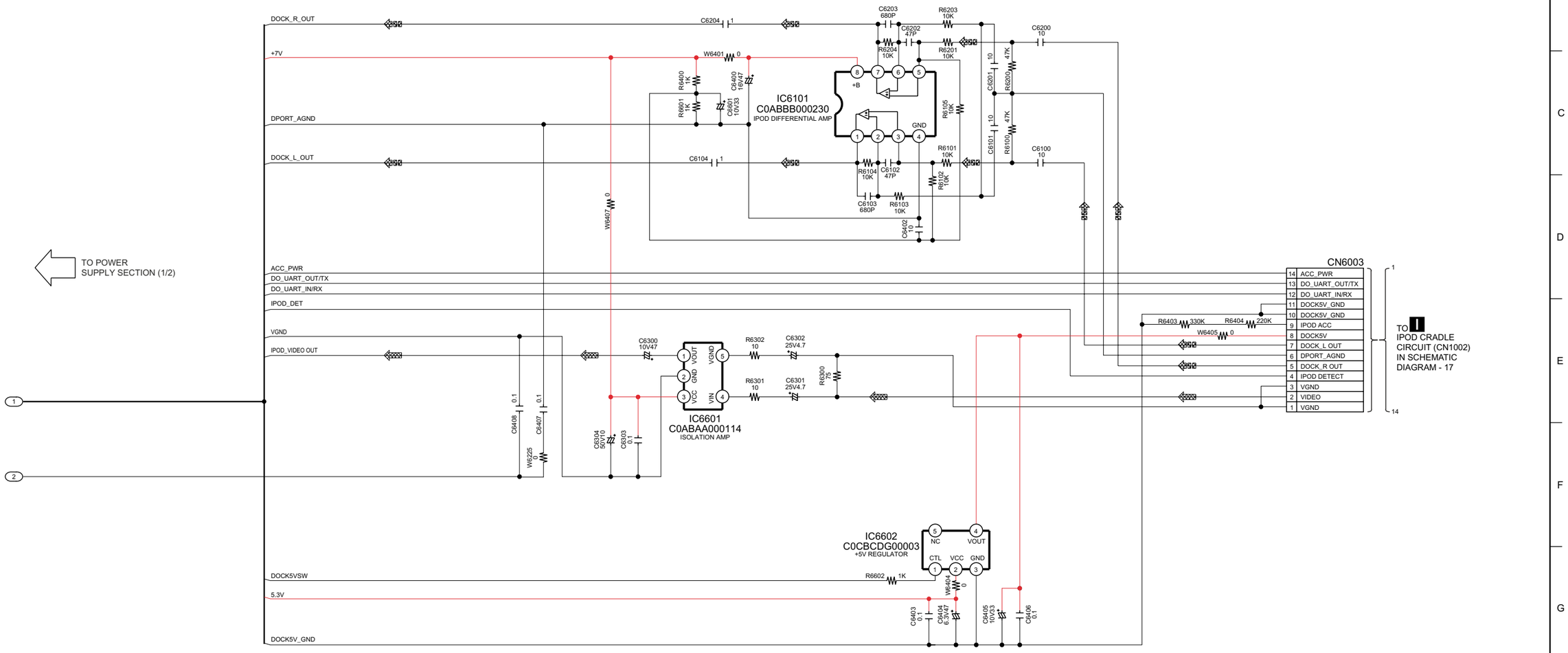
TO POWER SUPPLY SECTION (2/2)

1/2 2/2 SA-PT660P/PC POWER SUPPLY CIRCUIT

SCHEMATIC DIAGRAM - 14

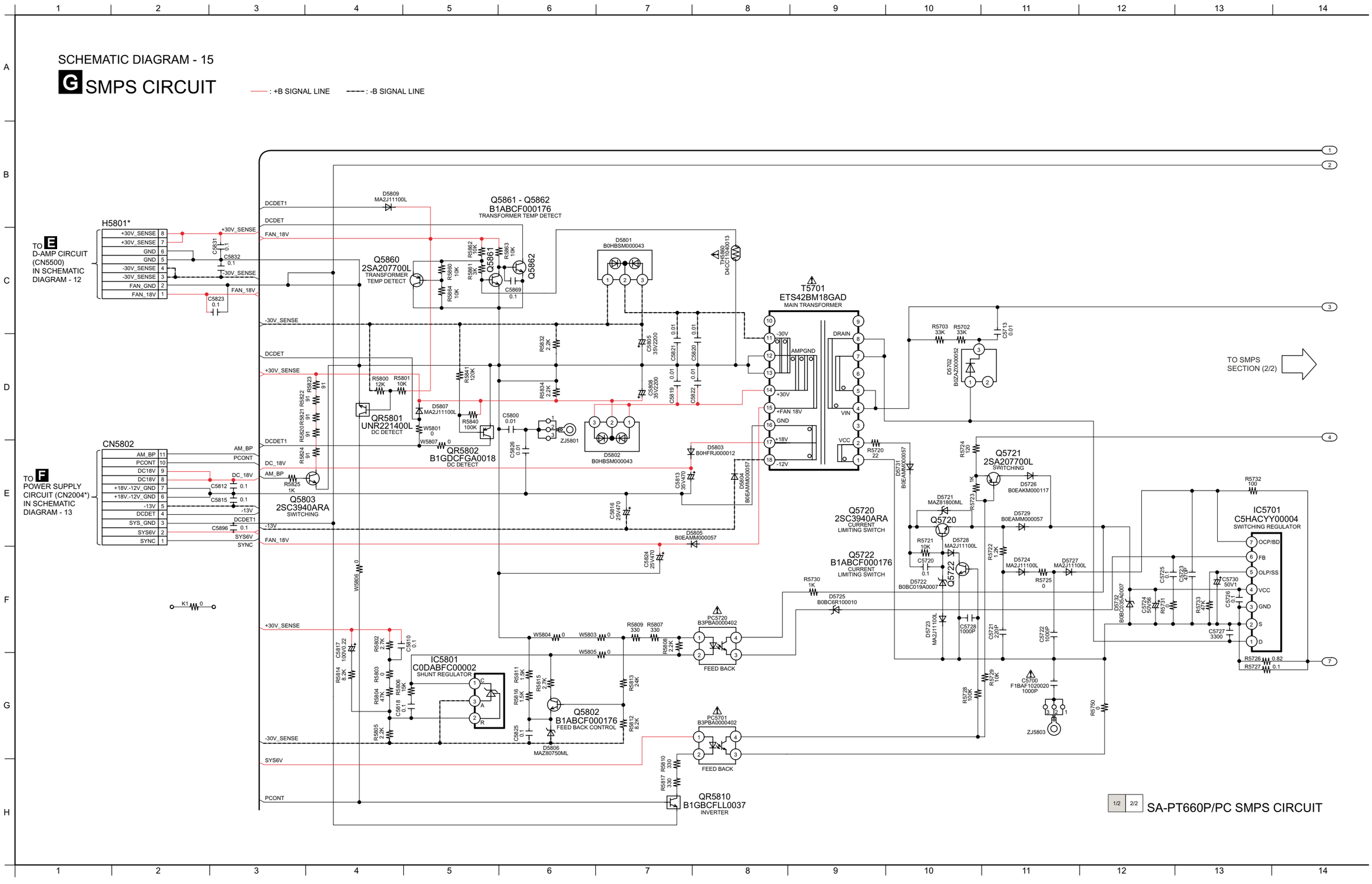
F POWER SUPPLY CIRCUIT

: +B SIGNAL LINE : -B SIGNAL LINE : IPOD AUDIO SIGNAL LINE : IPOD VIDEO SIGNAL LINE



1/2 2/2 SA-PT660P/PC POWER SUPPLY CIRCUIT

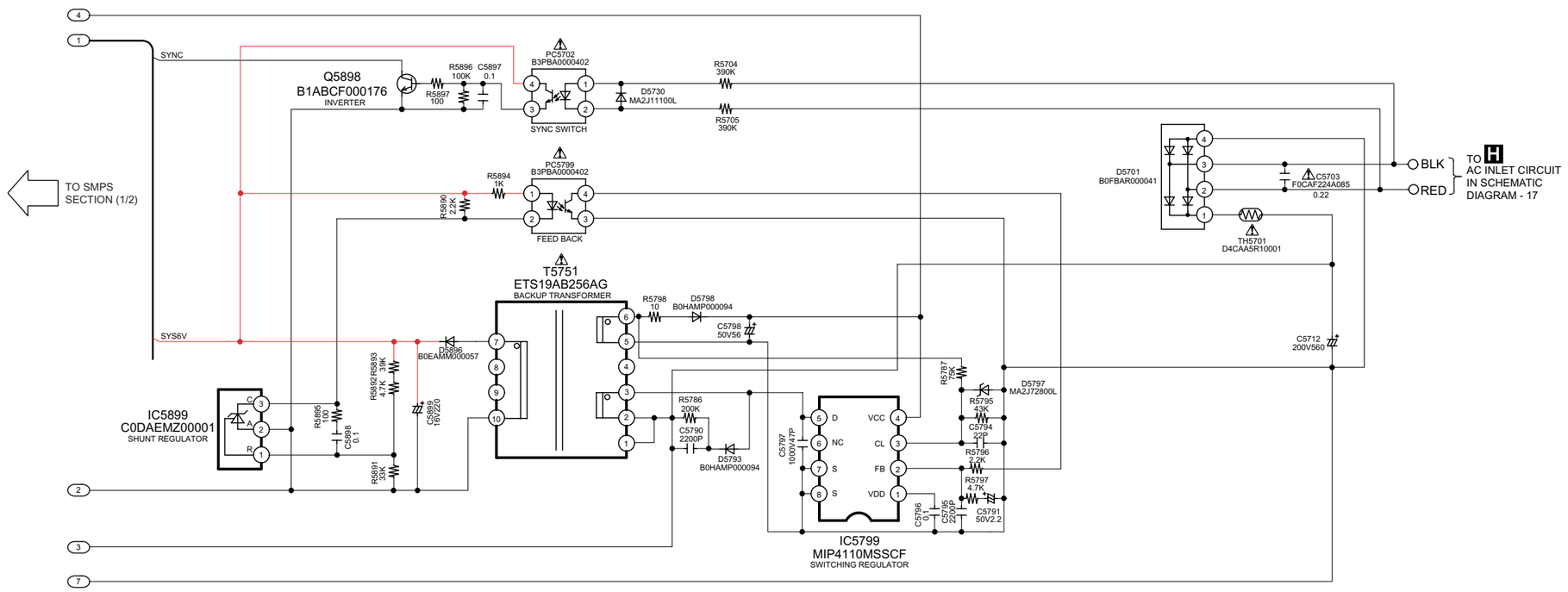
19.6. SMPS Circuit



SCHEMATIC DIAGRAM - 16

G SMPS CIRCUIT

: +B SIGNAL LINE : -B SIGNAL LINE

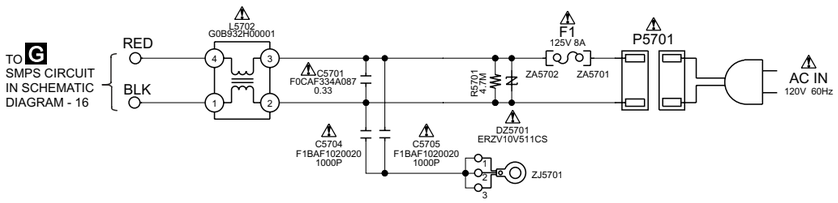


1/2 | 2/2 SA-PT660P/PC SMPS CIRCUIT

19.7. AC Inlet, Ipod Cradle Circuit

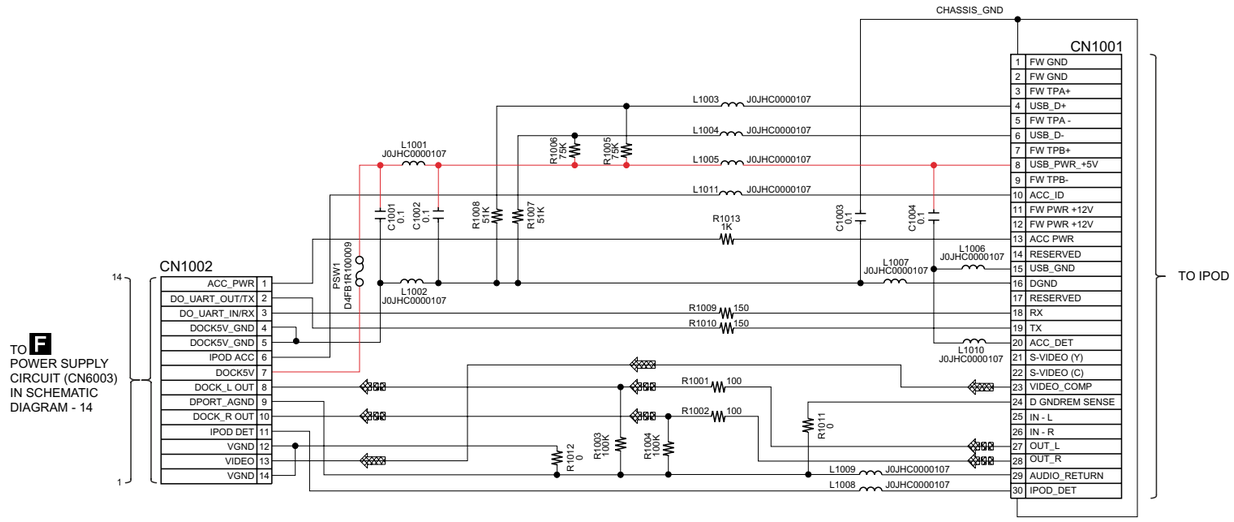
SCHEMATIC DIAGRAM - 17

H AC INLET CIRCUIT



I IPOD CRADLE CIRCUIT

—— : +B SIGNAL LINE : IPOD AUDIO SIGNAL LINE : IPOD VIDEO SIGNAL LINE



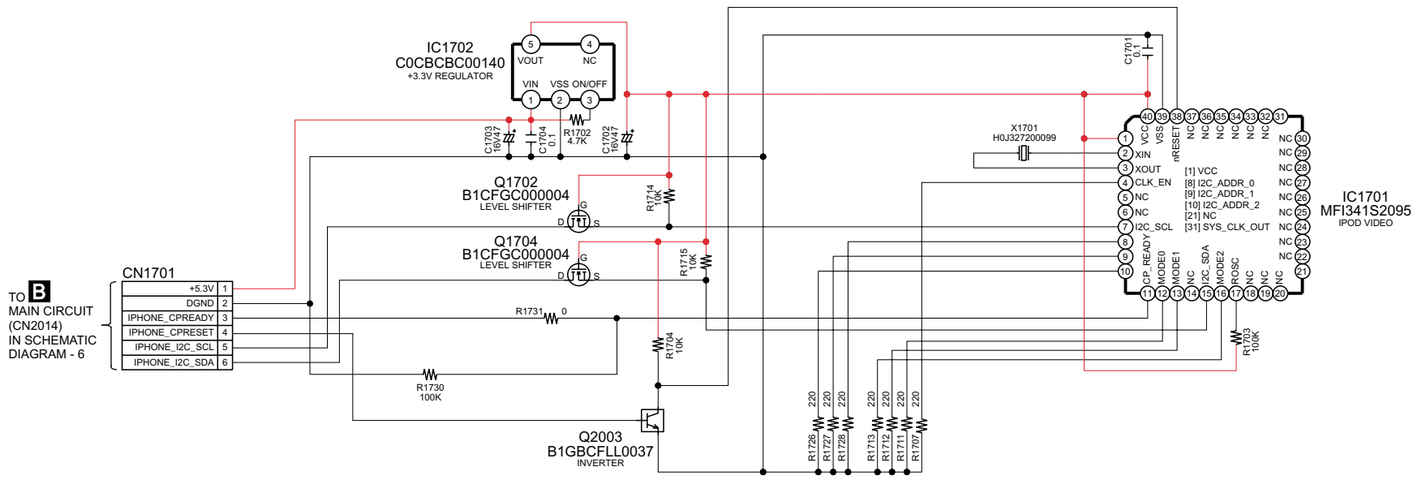
SA-PT660P/PC AC INLET / IPOD CRADLE CIRCUIT

19.8. Coprocessor, Wireless Adapter Circuit

SCHEMATIC DIAGRAM - 18

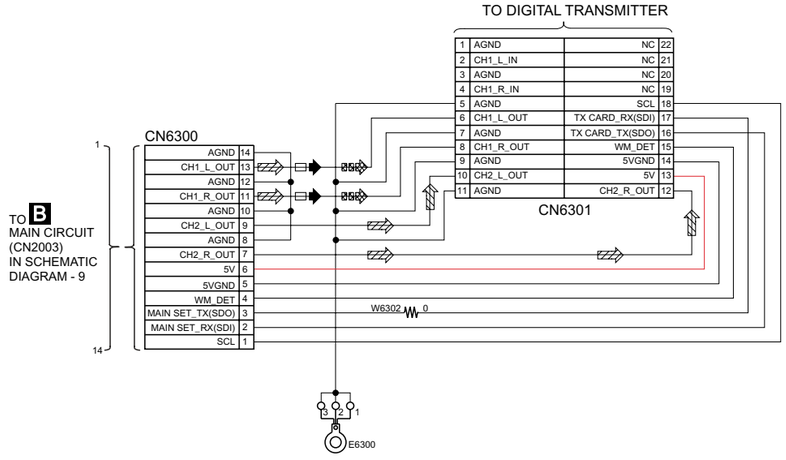
J COPROCESSOR CIRCUIT

: +B SIGNAL LINE



K WIRELESS ADAPTER CIRCUIT

: +B SIGNAL LINE : MAIN SIGNAL LINE : IPOD AUDIO SIGNAL LINE : AM / FM SIGNAL LINE

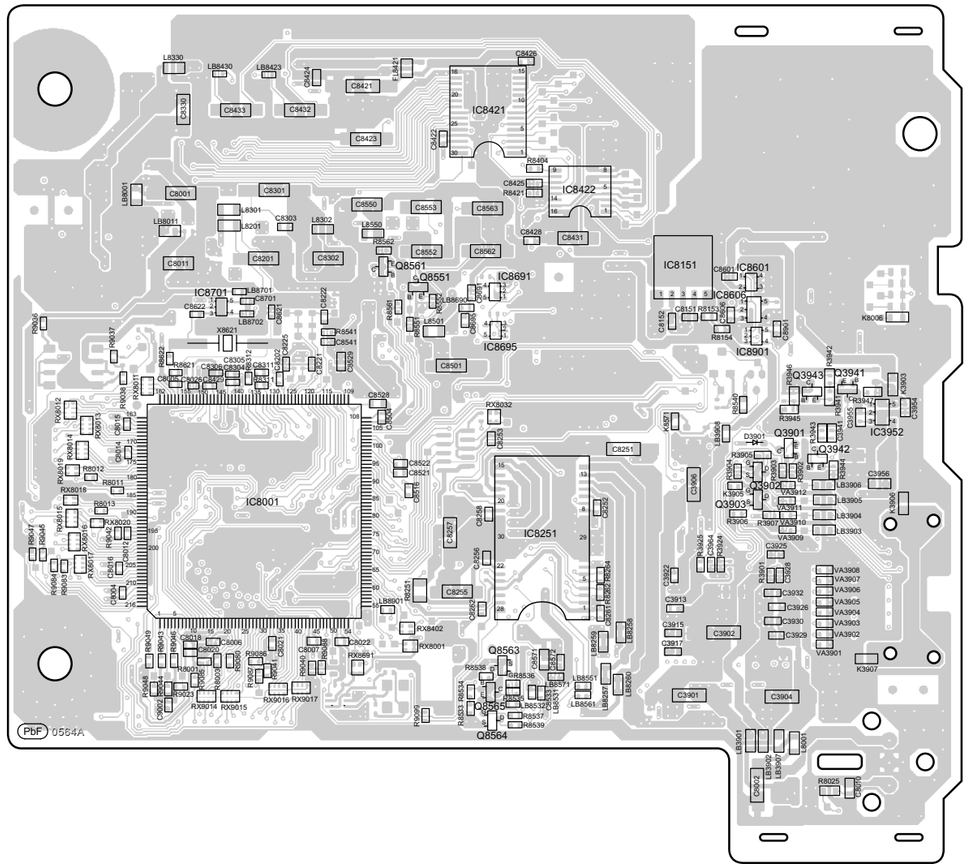


SA-PT660P/PC COPROCESSOR / WIRELESS ADAPTER CIRCUIT

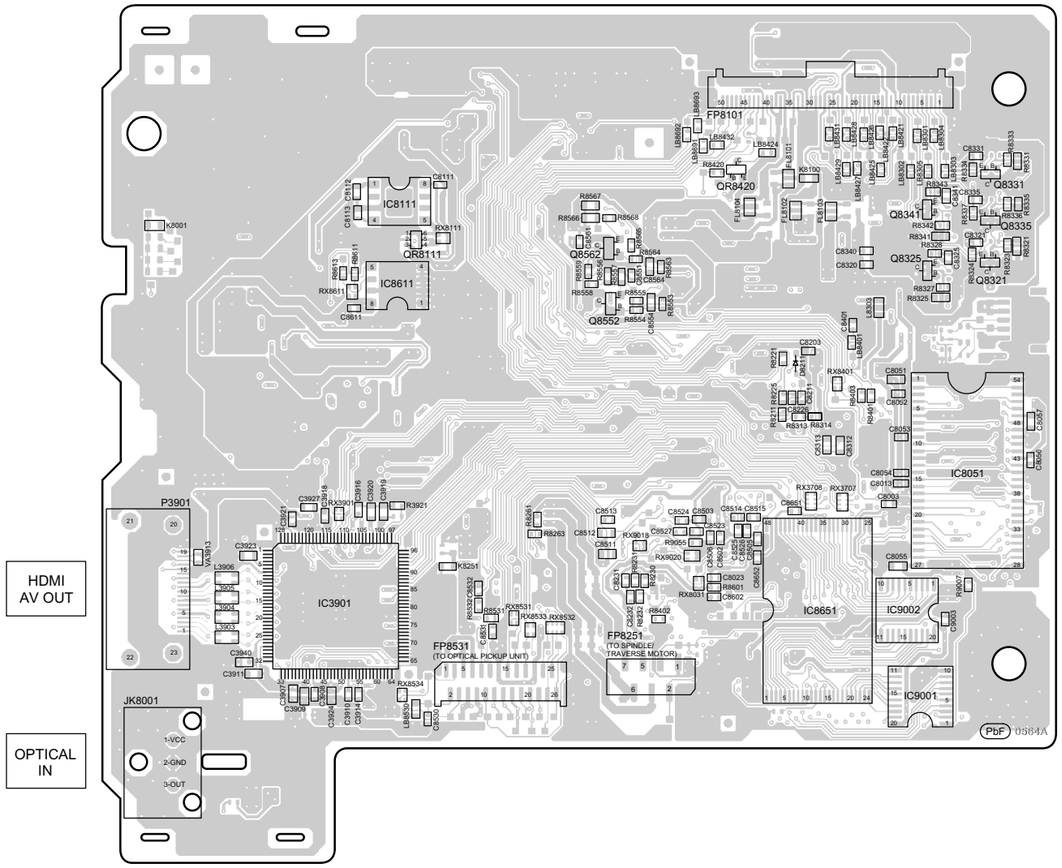
20 Printed Circuit Board

20.1. DVD Module P.C.B.

A DVD MODULE P.C.B. (REPX0620B)



(SIDE A)

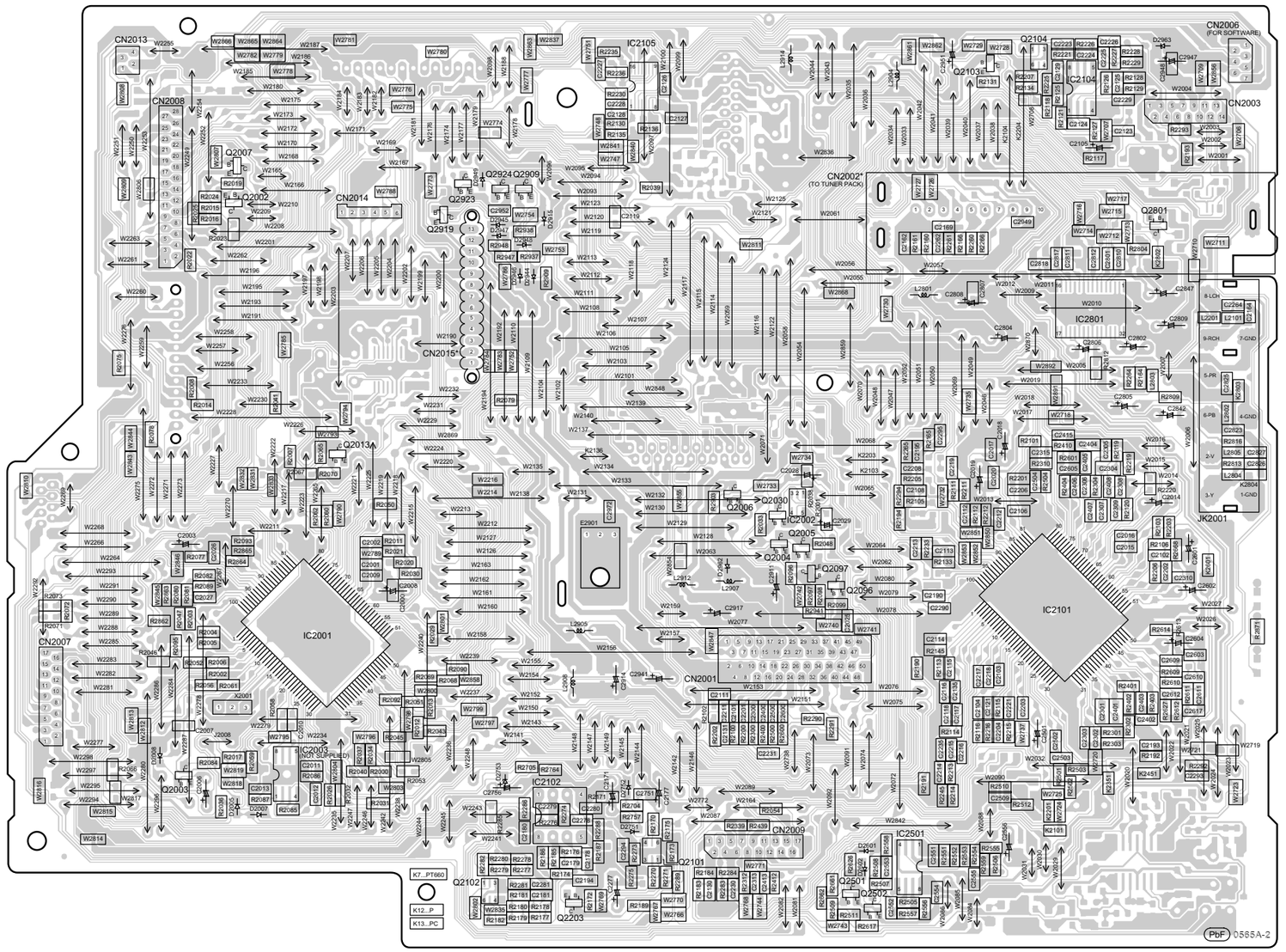


(SIDE B)

SA-PT660P/PC
DVD MODULE P.C.B.

20.2. Main P.C.B.

B MAIN P.C.B. (REPX0624A...P)
(REPX0624B...PC)



AUX

COMPONENT VIDEO OUT

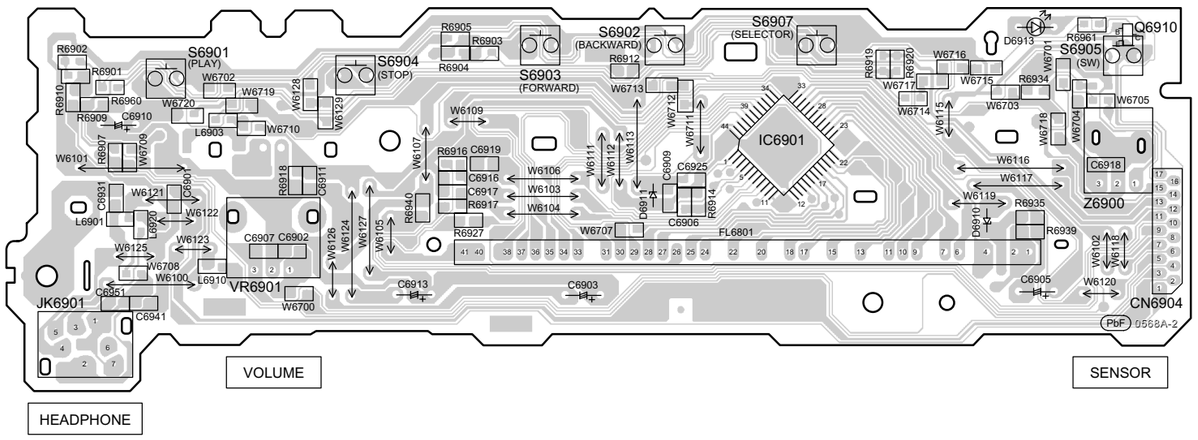
VIDEO OUT

* FOR INDICATION ONLY

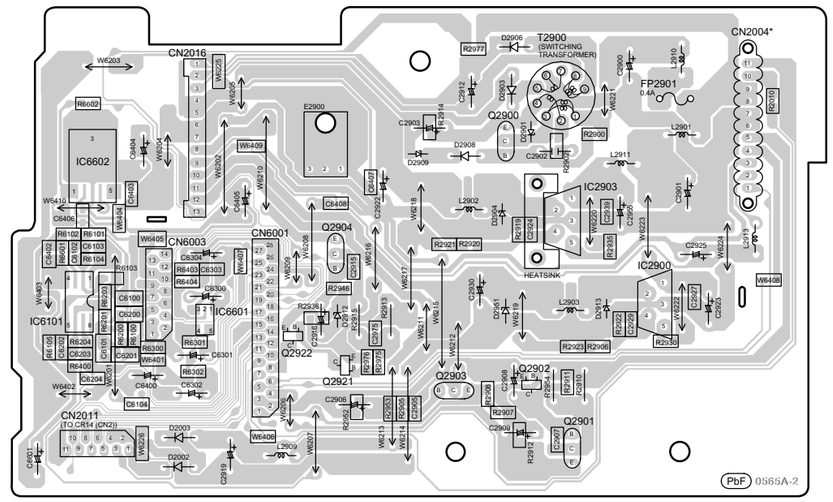
SA-PT660P/PC
MAIN P.C.B.

20.3. Panel, Power/Disc Button, Power Supply & AC Inlet P.C.B.

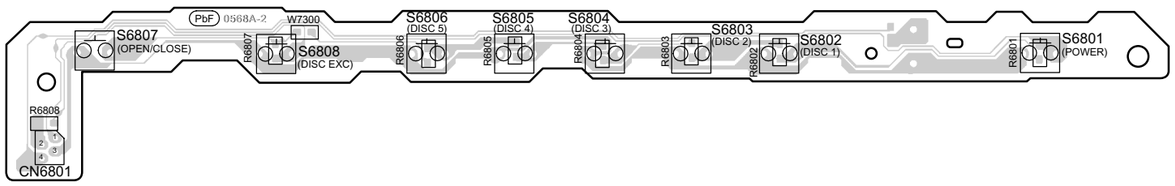
C PANEL P.C.B. (REPX0655K)



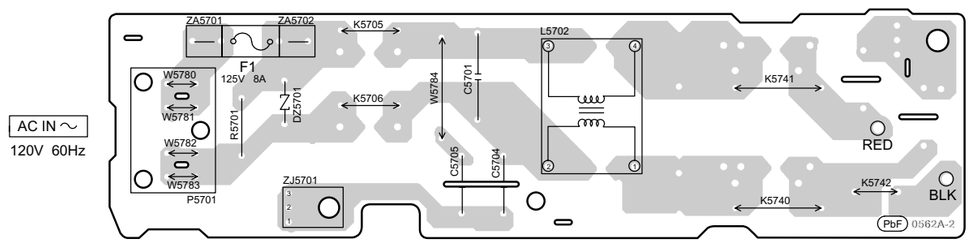
F POWER SUPPLY P.C.B. (REPX0624A...P) (REPX0624B...PC)



D POWER/DISC BUTTON P.C.B. (REPX0655K)



H AC INLET P.C.B. (REPX0622A)

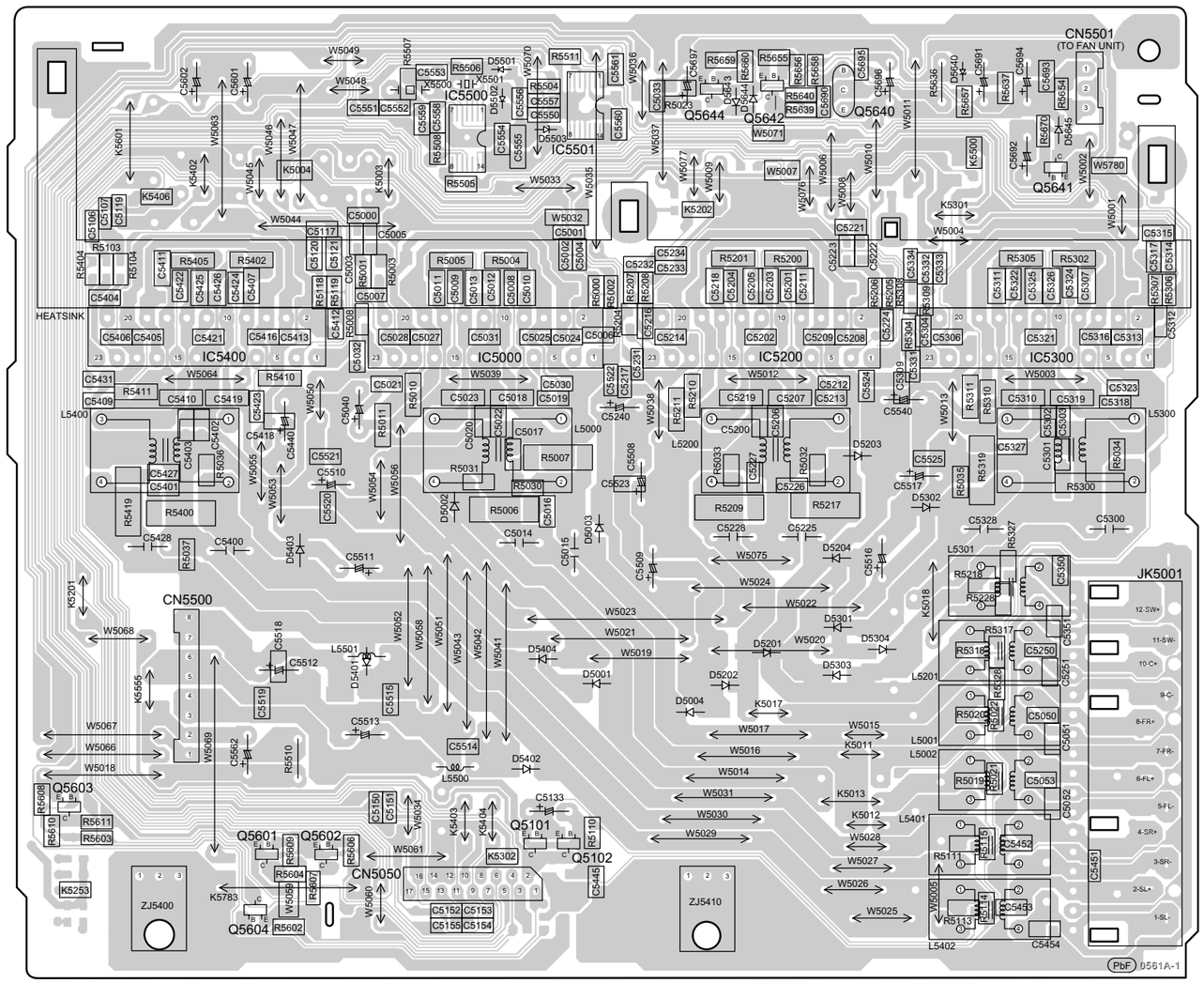


* FOR INDICATION ONLY

SA-PT660P/PC
PANEL/POWER/DISC BUTTON/POWER SUPPLY/AC INLET P.C.B.

20.4. D-Amp P.C.B.

E D-AMP P.C.B. (REPX0621C)



SUBWOOFER

CENTER SPEAKER

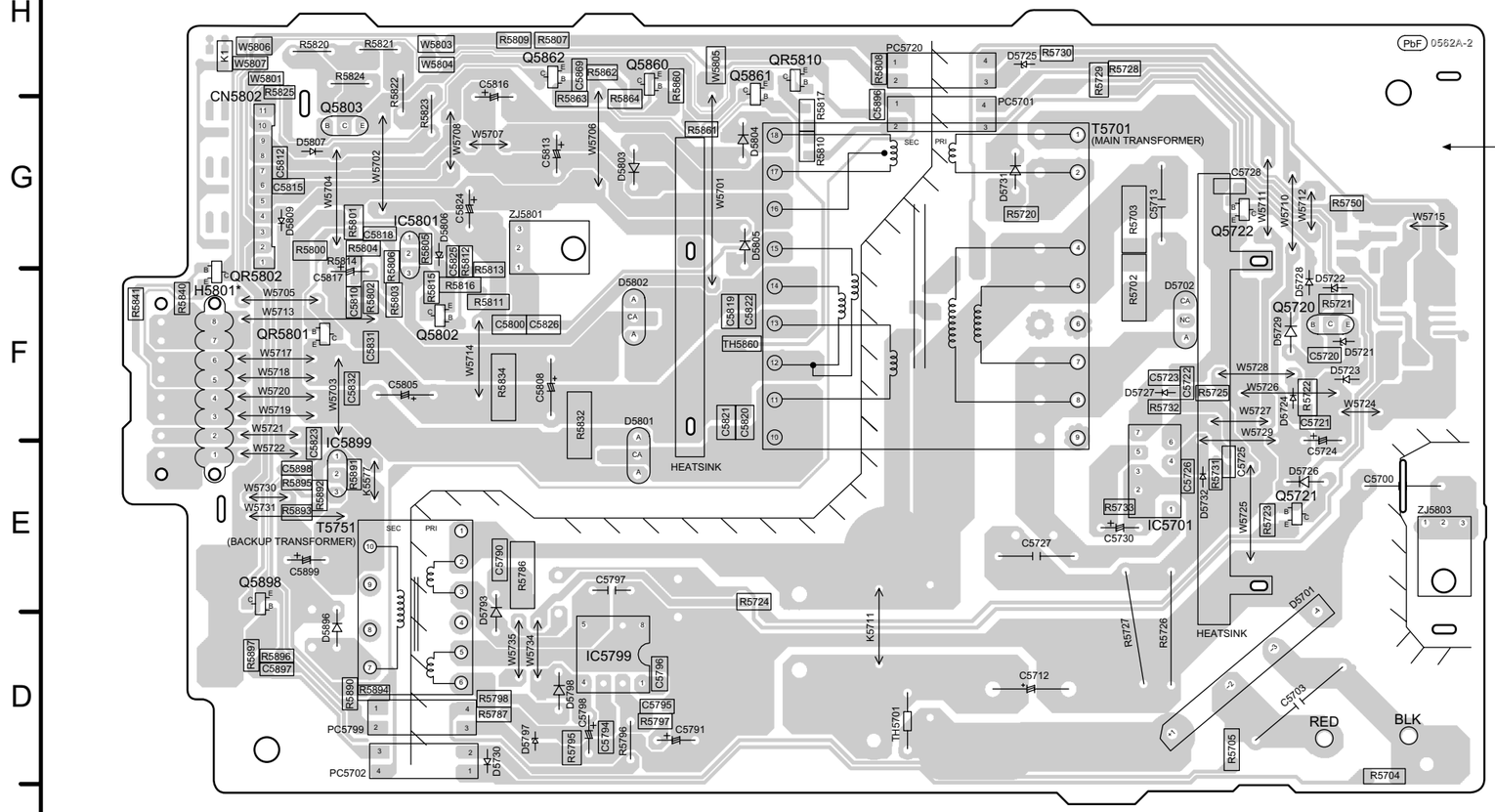
FRONT SPEAKERS

SURROUND SPEAKERS

SA-PT660P/PC
D-AMP P.C.B.

20.5. SMPS P.C.B.

G SMPS P.C.B. (REPX0622A)

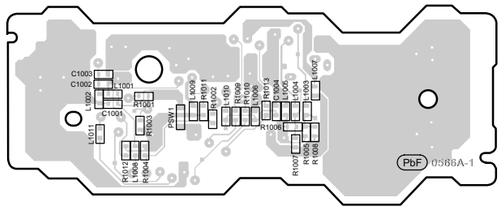


* FOR INDICATION ONLY

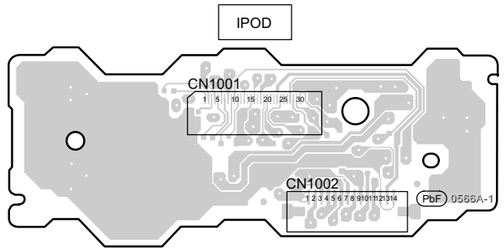
SA-PT660P/PC
SMPS P.C.B.

20.6. Ipod Cradle, Coprocessor & Wireless Adapter P.C.B.

I IPOD CRADLE P.C.B. (REPX0631A)

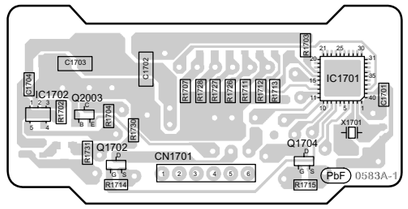


(SIDE A)

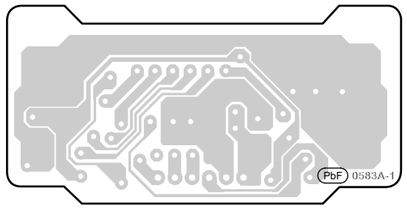


(SIDE B)

J COPROCESSOR P.C.B. (REPX0657B-A)

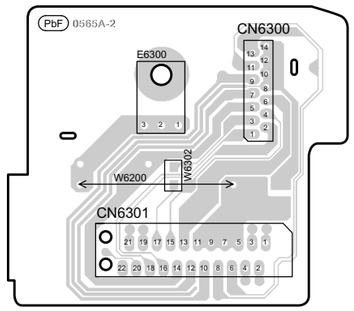


(SIDE A)



(SIDE B)

K WIRELESS ADAPTER P.C.B. (REPX0624A...P) (REPX0624B...PC)



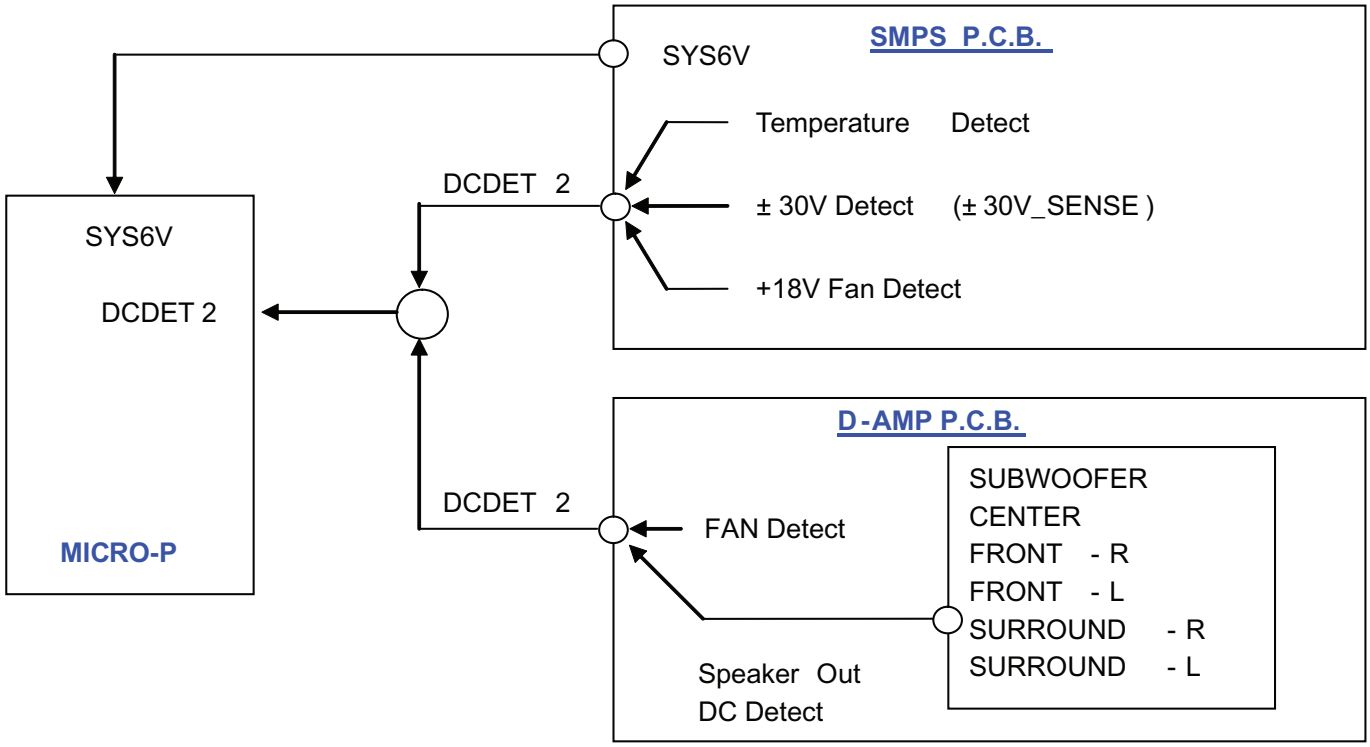
SA-PT660P/PC
IPOD CRADLE/COPROCESSOR/WIRELESS ADAPTER P.C.B.

21 Basic Troubleshooting Guide

21.1. Troubleshooting Guide for F61 and/or F76

This section illustrates the checking procedures when upon detecting the error of “F61” and/or “F76” after power up of the unit. It is for purpose of troubleshooting and checking in SMPS, D-Amp & Power Supply P.C.B.

21.1.1. Block Diagram



21.1.2. Troubleshooting Guide

Symptom	Checking Items	Repair Items	Remarks
FL display blinking with abnormal segment when power ON the set or "F61"	Check the soldering of the SMPS P.C.B. • Is there any solder crack at area (Q5860,Q5861, Q5862,TH5860, QR5801) • Check all the supply line ± 30V • Is there any solderability at area of feedback circuit • Check feedback circuit (IC5801, Q5802, D5806, PC5720, D5725)	Touch-up the solder crack area/ Change the defective parts. • Q5860,Q5861,Q5862,TH5860 (Temperature Detect) • QR5801 & QR5802 (± 30V Detect) • Touch-up the necessary areas • IC5801, D5806, PC5720, D5725	SMPS P.C.B. Refer to Fig. 1
First Power ON Display immediate show "F61".	Check Speaker output by using multi-meter, • If there is a DC Voltage around ± 30V • Check Output IC (Pin 10 & 14) which have DC Voltage at Speaker output short to ± Vdd/Vss • If shorted that means D-Amp damage already.	Change the defective parts. D-AMP IC: IC5000/IC5200/IC5300/IC5400 P/N = C1BA00000487 For Configuration Refer to Table 1	D-AMP P.C.B. Refer to Fig. 2
Power ON for a while then only trigger "F61". (Symptom always happen)	Check the fan connection & feedback loop: • If the fan not proper connected, "F61" will trigger when the volume increase. • If the fan is not working, check for fan circuit. Check the soldering of the SMPS P.C.B. • Is there any solder crack at area (Q5860,Q5861, Q5862,TH5860, QR5801) • Check all the supply line ± 30V	Re-connect the Fan to CN5501 Fan circuit: Q5640, Q5641, Q5642, Q5644 Touch-up the solder crack area/ Change the defective parts. • Q5860,Q5861,Q5862,TH5860 (Temperature Detect) • QR5801 & QR5802 (± 30V Detect) Feedback Circuit: IC5801, PC5720, D5725	D-AMP P.C.B. Refer to Fig. 3
Power ON for a while and then trigger "F76"	Check all supply voltages as follows: Step 1: Check for supply voltages from SMPS P.C.B to Power Supply P.C.B at pin 8 & 9 of CN2004. If there are supply voltages, proceed to Step 2. If no voltages detected, check wire connection and circuitry connection from SMPS P.C.B. Step 2: Check if there is supply voltages for –Vp, F+ & F- at CN2016 • If there is supply voltages of +5.3V, +2.5V (For DVD), +6V (SYS6V), +9V & +18V at CN2016 • If there is supply voltages of ±7V at CN6001	Check and change the possible defective parts. • FP2901 (Fuse Protector), T2900, D2901, D2906, D2908, D2909 • IC2903 (DC-DC Converter IC) & related regulator circuit components • IC2900 (DC-DC Converter IC) & related regulator circuit components	Power Supply P.C.B Refer to Fig. 4

21.1.3. Part Location

21.1.3.1. SMPS P.C.B.

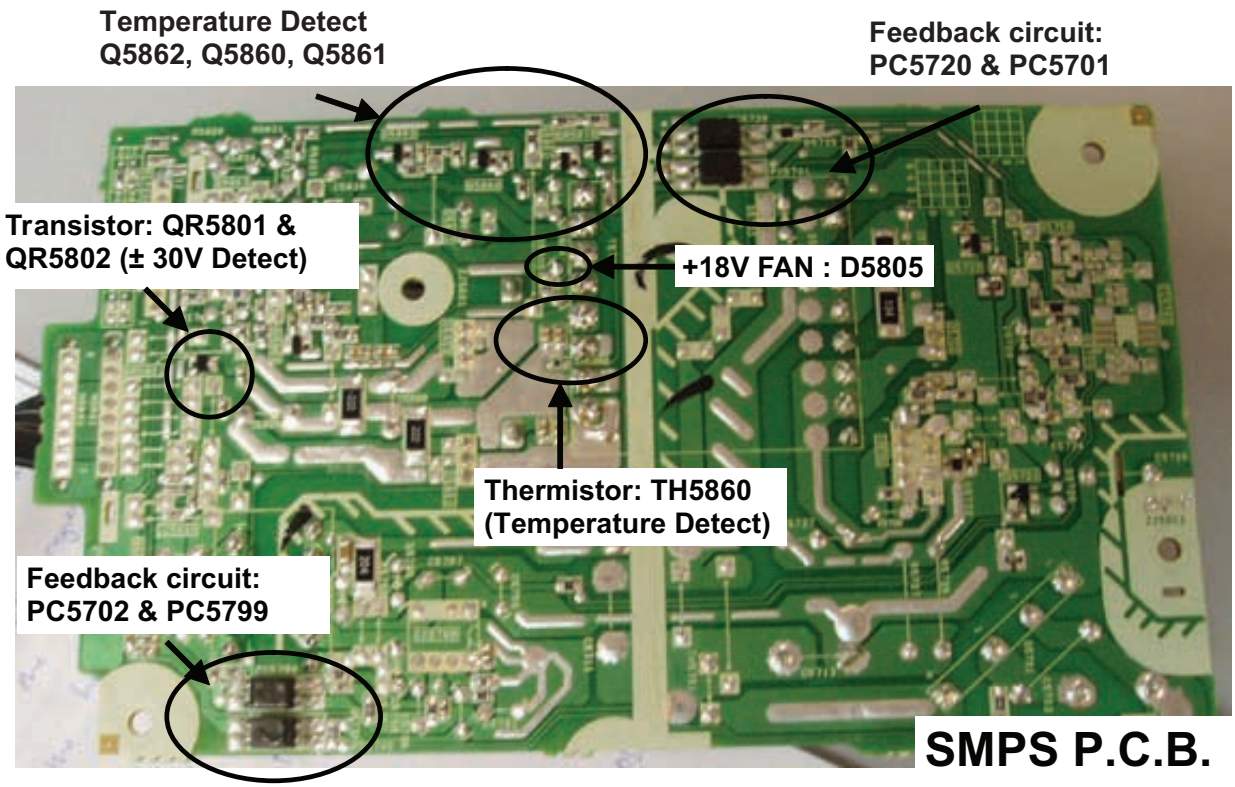


Fig. 1 SMPS P.C.B.

21.1.3.2. D-Amp P.C.B.

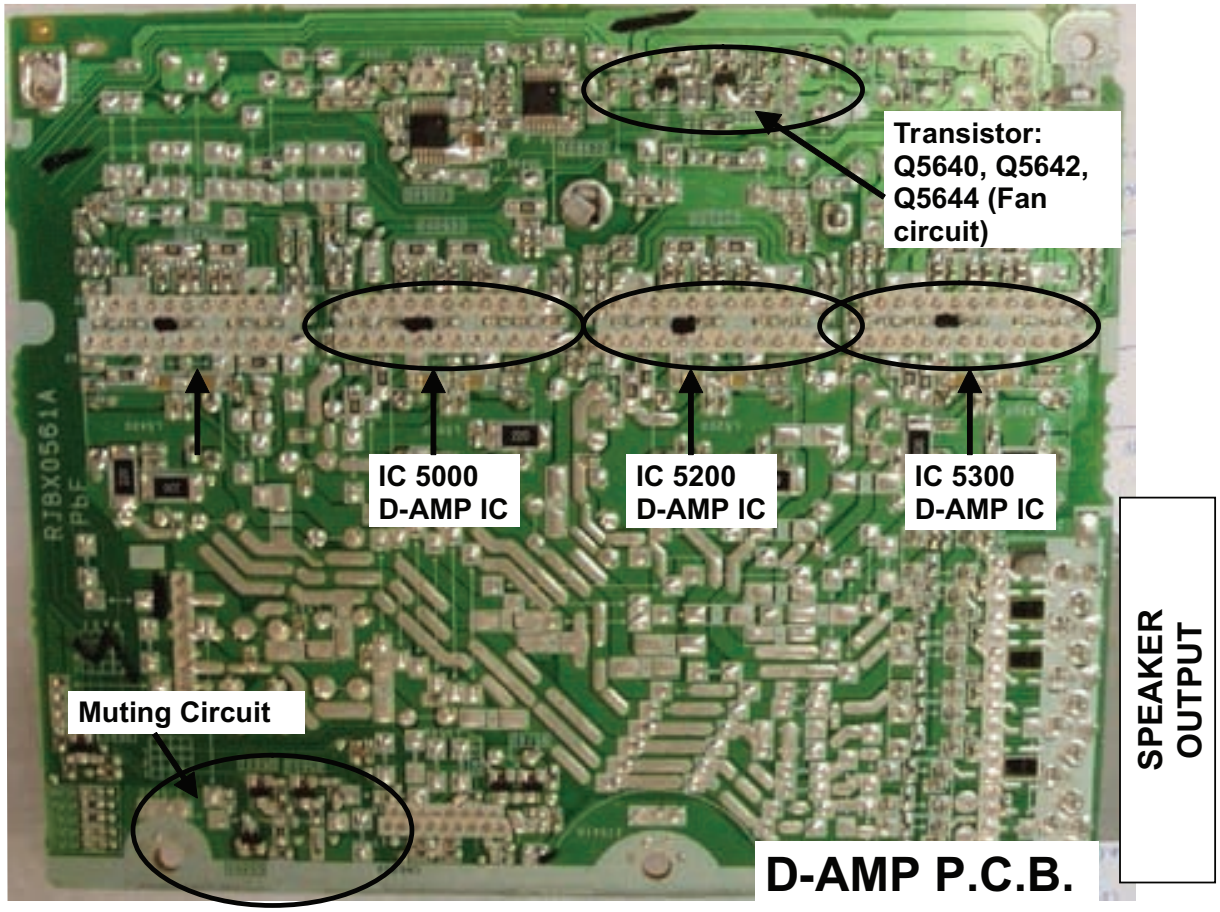


Fig. 2 D-AMP P.C.B.

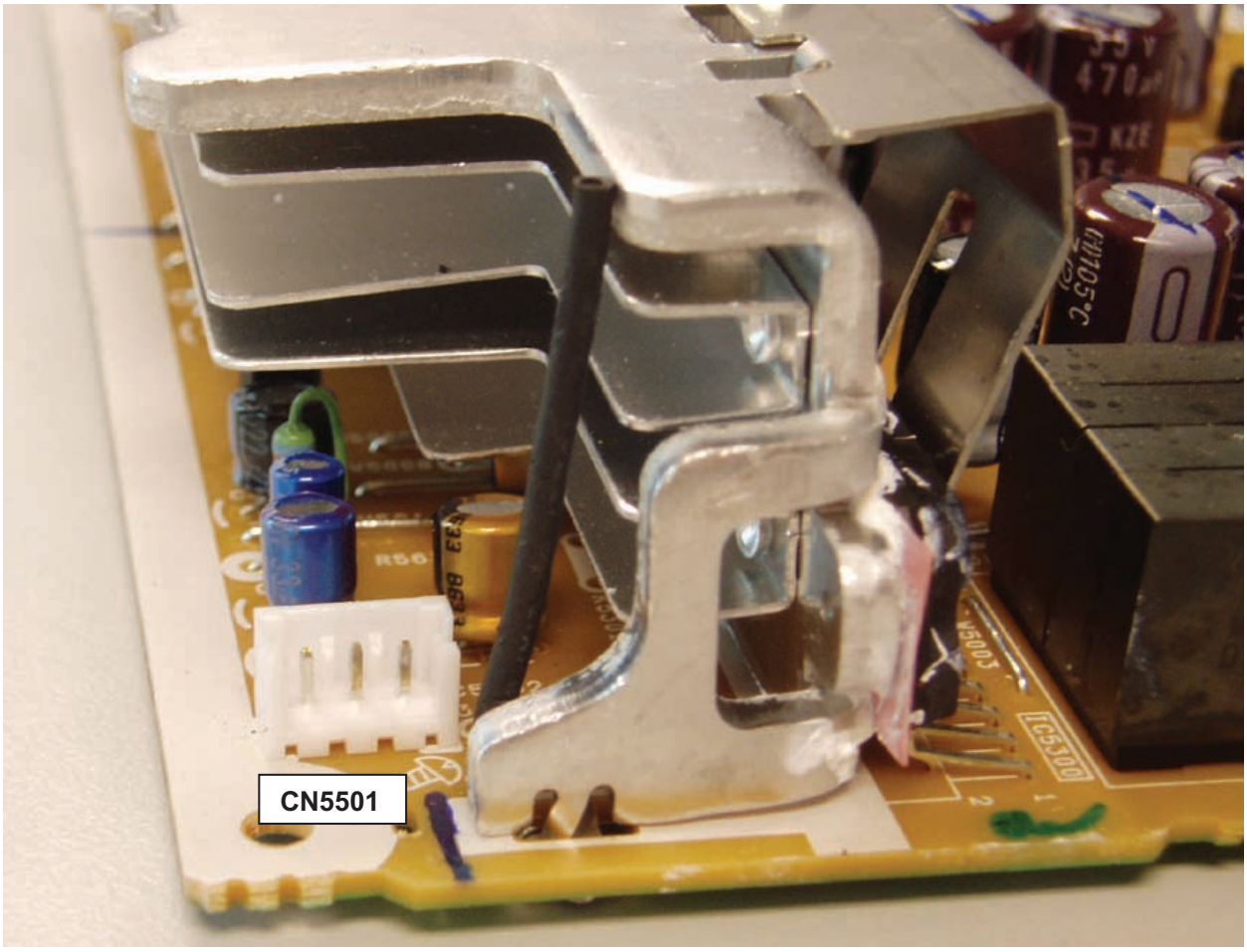


Fig. 3 Fan Connector

21.1.3.3. Power Supply P.C.B.

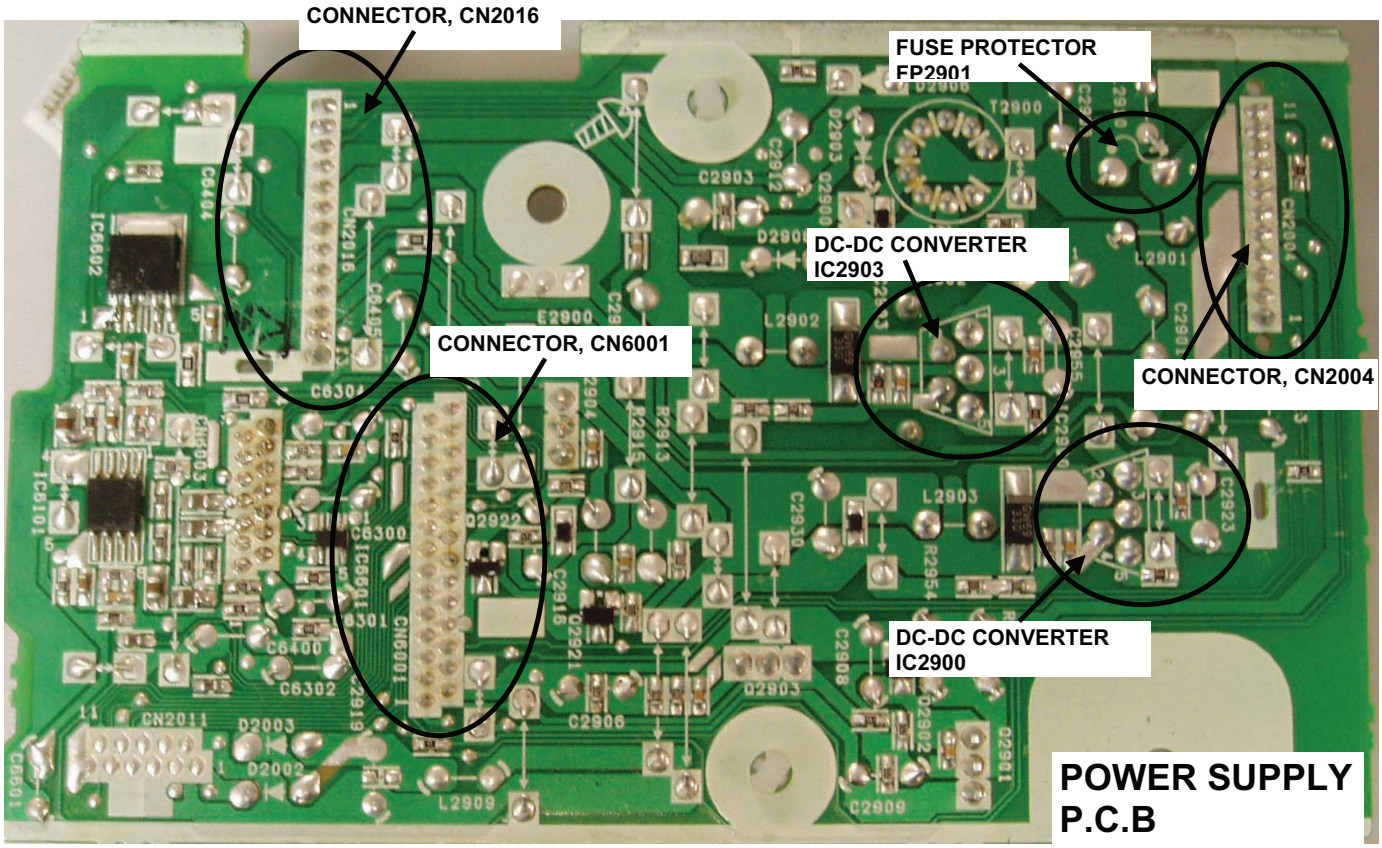


Fig. 4 Power Supply P.C.B.

21.1.3.4. D-Amp IC Configuration

		PT660P/PC
IC5300	Pin (10)	Sub-Woofer +
	Pin (14)	Sub-Woofer -
IC5200	Pin (10)	Center +
	Pin (14)	Center -
IC5000	Pin (10)	Front Right
	Pin (14)	Front Left
IC5400	Pin (10)	Surround Right
	Pin (14)	Surround Left

Table 1

21.2. Basic Troubleshooting Guide for Traverse Unit (DVD Module P.C.B.)

Problems	Checking Points	Checking components
1) Distorted picture or abnormal sound is head during the initialization	a) Check SDRAM address, data bus, CLK and other control signals waveform	IC8051
	b) Check video signals (Y,C)	LB8301, R8321, R8323, LB8302, R8325, R8327
	c) Check audio DAC circuitry * Compare the above with OK condition DVD Module P.C.B	IC8421 (Pin 9 to 11 & 17 to 22) LB8425, LB8426, LB8427, LB8428, LB8429, LB8431 *Check for solder short and/or component missing/damaged
2) No TOC/Long TOC	a) Check motor driver circuitry (+5V)	IC8251 Pin 8, 21
	b) Check laser drive circuitry (Voltages & current)	Q8551, Q8552 (For DVD), Q8561, Q8562 (For CD)
	c) Check LSI IC connection to motor drive circuitry * Compare the above with OK condition DVD Module P.C.B.	IC8001 Pin 66, 67 IC8251 Pin 15 to 16 * Check for solder short and/or component missing/damaged
3) Disc not spinning 4) Traverse not moving 5) Traverse and spindle abnormal movement	a) Check connection from DVD Module to Traverse unit	FP8251
	b) Check motor driver circuitry on the voltages and control signals * Compare the above with OK condition DVD Module P.C.B.	IC8251 * Check for solder short and/or component damaged
6) Cannot read the disc but spindle motor is spinning - Cannot read CD/DVD	a) Check laser drive circuitry (voltages and current) - Check CD Laser Drive - Check DVD Laser Drive * Check voltages and LD current and compare with OK condition DVD Module P.C.B.	Q8551, Q8552, LB8551 (For DVD Laser Drive current) Q8561, Q8562, LB8561 (For CD Laser Drive current)
7) Block Noise during play	a) Check SDRAM address and data bus signal	IC8051
8) Jitter out of specification	a) Check LD current b) Check OPU (Change to other unit and confirmed operating condition)	OPU Unit (Traverse unit), FPC connection (FP8531 & FP8251)

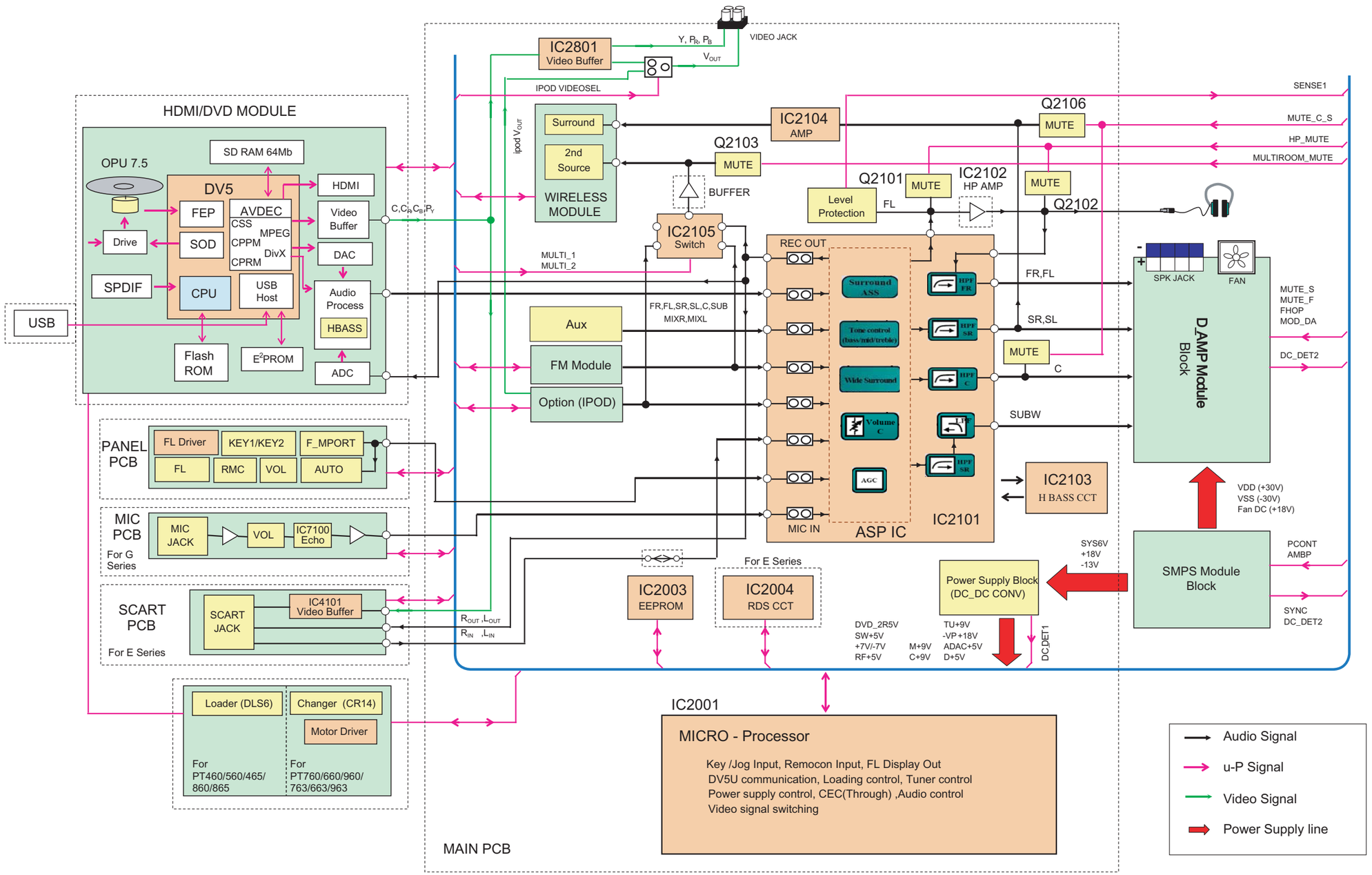
21.3. Basic Troubleshooting Guide for HDMI AV Output

Problems	Checking Points	Checking components
1) TV does not have any display. Set FL display shows U702/U703	1) Check setting of the set in Setup Menu whether the HDMI Video output is turned ON	* This year HDMI always ON. No need check Setup Menu. If no resolution selection GUI, then only check SETUP.
	2) +5V Supply to the TV	IC3952 (Pin 4)
	3) HDMI Connector Solderability condition	P3901
	4) HDMI Output TDMS signal lines (IC3901) - Data (TX0P/M => 14, 16) - Data (TX1P/M => 18, 20) - Data (TX2P/M => Pin 22, 24) - Clock (TXCP/TXCM => Pin 10, 12)	 L3905 L3904 L3903 L3906
	5) HDMI Transmitter communication lines to TV - Data, SDA (Pin 120, IC3901) - Clock, SCL (Pin 121, IC3901)	 LB3905, R3905, Q3902, R3904 LB3904, R3907, Q3903, R3906
	6) HDMI Transmitter communication from LSI (IC8001) (I2C_SCL/I2C_SDA signals)	RX3901
	7) Local Port Slave Address setting resistor at Pin 99 of HDMI Transmitter LSI IC (IC3901) for LPSA signal	R3921
	8) HDMI Transmitter LSI IC (IC3901) +3.3V Supply	LB3901, LB3902, IC3901 (Pin 9, 13, 17, 21, 25, 124)
	9) HDMI Transmitter LSI IC (IC3901) +1.2V Supply	IC3901 (Pin 5, 26, 42, 47, 55, 75, 85, 102, 109, 116, 123), LB3908, IC8151 (Pin 4), LB8001, IC8001 (Pin 20, 44, 83, 158, 187, 211)
	10) HDMI Up-Con +3.3V Supply	LB3901
	11) HDMI Pixel Clock Output from Up-Con to HDMI Transmitter (VCLK)	LB8901
	12) Up-Con IC I2C Data and Clock Line	RX3901

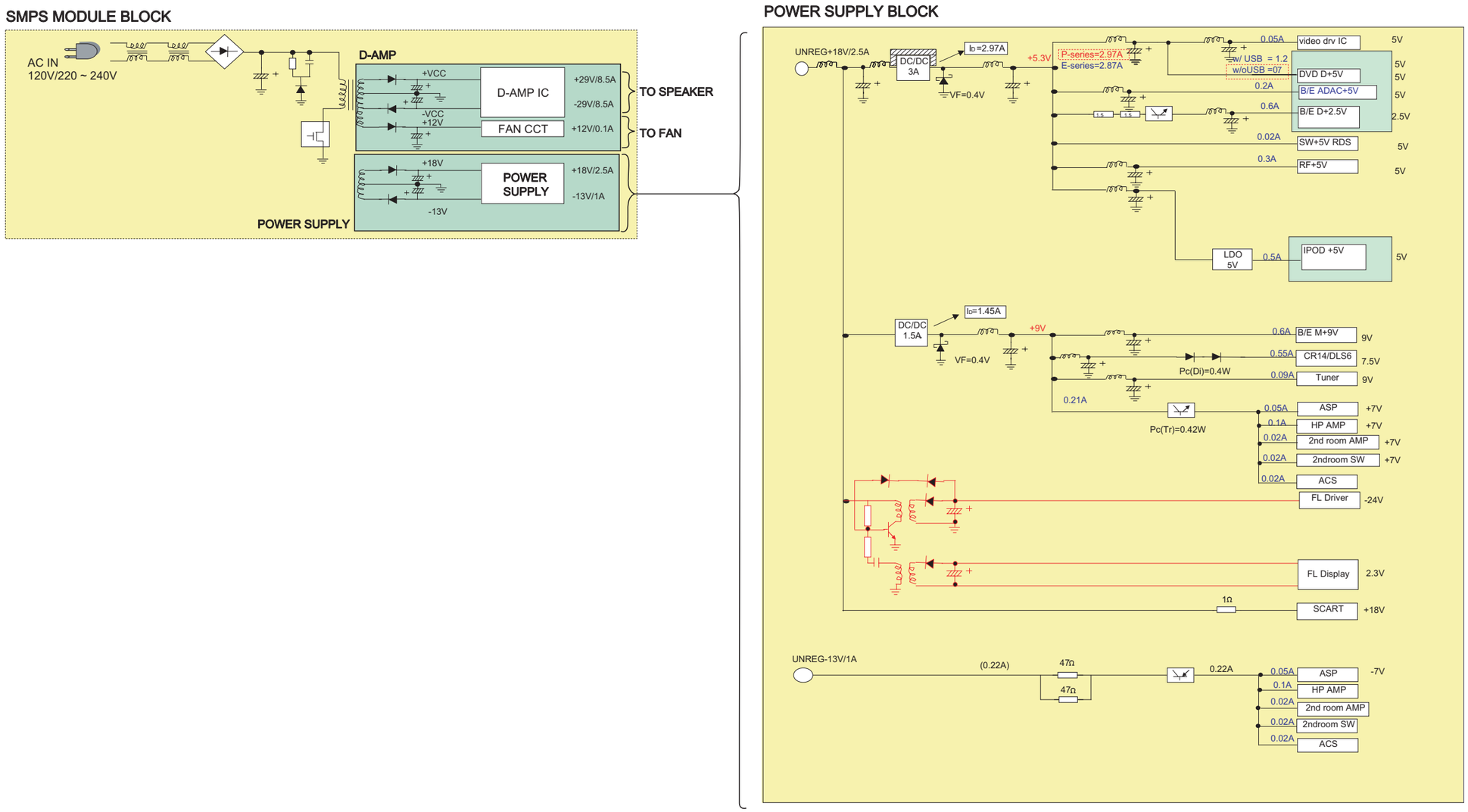
Problems	Checking Points	Checking components
1) TV does not have any display. Set FL display shows U702/U703	13) Hot-Plug Signal	LB3906, R3902, R3903, Q3901, D3901
	14) TDMS Output swing amplitude control resistor	R3901
	15) Host Interface External Input Clock from LSI (IC8001) to Up-Con IC (IC3901) - OSC27M	LB8702
	16) Video Data Lines from LSI (IC8001) to Up-Con (IC3901)	RX3707, RX3708, IC3901 (Pin 92 to 95, Pin 87 to 90)
2) When switching the video output mode from 480P to 720p/1080i, TV display becomes blank	1) Supply for Up-Con (IC3901) - Pin 9,124 2) GND for Up-Con - Pin 7,125 3) Check for capacitor short to GND	LB3902 C3902, C3928, C3925
3) Color Problem. TV Screen is White/Blue/Purple	1) Check digital video data line from LSI(IC8001) to Up-Converter (IC3901), VOUT0-VOUT7.	RX3707, RX3708
4) HDMI got no audio output	1) Audio data lines 2) Check setting of the set in Setup Menu whether the HDMI Audio output is turned On	R8402, RX8402 * Check for solder short and/or component missing/damaged as well as signal condition.

22 Overall Simplified Block for PT660

Overall Block Diagram



22.1. SMPS Module & Power Supply Block



23 Terminal Function of ICs

23.1. IC2001 (RFKWPT760P): IC System Control

Pin No.	Terminal Name	I/O	Funtion
1	IPHONE _CPREADY	I	IPhone Detect Control Signal
2	TRAY_CW_H	O	Tray Control Signal 1
3	TRAY_CCW_L	O	Tray Control Signal 2
4	OPEN SW /UNLOAD_SW	I	Open/Unload Signal
5	FX_DO	O	Wireless Data Output Signal
6	MIC_LVL1	O	MIC Volume Level Control Signal 1
7	FX_DI	I	Wireless Data input Signal
8	BYTE	I	VSS (GND)
9	CNVSS	I	VSS (GND)
10	LO_F	I	Loading Forward (CR14)
11	Lo_R	I	Loading Reverse (CR14)
12	RESET	I	System Reset Input
13	XOUT	-	Main Clock Output (10MHz)
14	VSS	-	GND (0V)
15	XIN	-	Main Clock Input (10MHz)
16	VCC	-	Power Supply (+5V)
17	NMI	I	Connect to VCC External Interrupt I/P
18	RMT	I	Remote Control Input
19	SYNC	I	AC Failure Detect Input
20	IPHONE _RST	O	IPhone Reset Output
21	IPOD_EN	O	IPhone Enable Output
22	SCARTTV	I	Scart TV Selector Enable Signal Input
23	EDA	O	Data Signal for EEPROM IC
24	ECK	O	Clock Signal for EEPROM IC
25	ECS	O	Latch Signal for EEPROM IC
26	INNER SWITCH	O	Control Signal
27	MIC_LVL2	O	MIC Volume Level Control Signal 2
28	DVD_CLK	O	Clock Signal for DVD
29	DVD_STAT	I	Status Signal for DVD
30	DVD_CMD	O	Command Signal for DVD
31	UART_TX	O	UART Transmitter Output Signal
32	UART_RX	I	UART Receiver Input Signal
33	FX_CLK	O	Wireless Output Clock
34	FX_DET1	I	Wireless Detect Signal
35	VMUTE2	O	Video Muting Control Signal
36	MIC_VOLUP	I	MIC Volume Up Control Signal
37	TUN_DO	O	Tuner Stereo Detect Signal
38	TUN_DI	O	Tuner I2C Data Signal
39	TUN_CLK	O	Tuner I2C Clock Output Signal
40	PCONT	O	System Power Control
41	EPM	I	For Flash Programming
42	DVD_MUTE	I	DVD Muting Control Signal
43	DC_DET1	I	DC Detect Signal 1
44	SCART_MUTE	O	Scart Muting Control Signal (Line-Out)
45	ACS_EN	I	Wide Sound Surround Enable Signal
46	VMUTE	O	Video Muting Control Signal
47	ASP_CLK	O	Clock Signal for ASP IC
48	ASP_DAT	O	Data Signal for ASP IC
49	TUN_SD	I	Tuner Station Detect Signal
50	MIC_VOLDOWN	O	No Connection
51	HOME_CR	I	Home Sensor (CR14)
52	HBASS SW	O	Harmonic Bass Control Signal
53	AMBP	O	AM Beatproof
54	MULTI_1	O	Multi Level Control Signal 1
55	MULTI_2	O	Multi Level Control Signal 2
56	POSITION_CR14	I	Position Sensor (CR14)
57	IPOD_VIDEO_SEL	O	IPod Video Selector Signal
58	MULTIROOM_MUTE	O	Multi Room Muting Control Signal
59	MODE	O	Mode Sensor (CR14)
60	IPOD_ACC	I	IPod Power Supply Control Signal
61	OPT_EN	I	Optical Enable Input Signal
62	VCC	-	Voltage Supply (+5V)
63	DC_DET2	I	DC Detect Signal 2
64	VSS	-	GND (0V)
65	YC_H	O	Video Mixing Signal
66	RDS_DAT	O	RDS Decorder Data Signal
67	HOP_DA	O	Frequency Hopping for Digital-Amp
68	MUTE_C_S	O	Muting Control for Center & Surround
69	MUTE_F_SW	O	Muting Control for Front & Subwoofer
70	RGB_H	O	Video Output Muting Signal
71	MOD_DA	O	Mode Control for D-Amp
72	VCOMP_MUTE	I	Video Component Mute Control
73	CEC_OUT	O	HDMI/CEC Output Control
74	ACS_MUTE	O	ACS Muting Control
75	CEC_IN	I	HDMI/CEC Input Control
76	JOG_A	I	Volume Jog Signal A
77	JOG_B	I	Volume Jog Signal B
78	HP_MUTE	O	Headphone Muting Control Signal
79	BATT_PCONT	O	Battery Power Control for IPOD
80	AV_MUTE	O	AV Muting
81	TOP	I	TOP SW (CR14)
82	IPOD_DET	I	IPod Detect Signal
83	OPEN_CR	O	Open Switch (CR14)
84	CLOSE_CR	O	Close Switch (CR14)
85	FLD_CLK	O	FL Driver Strobe Signal
86	FLD_STB	O	FL Driver Standby Signal
87	FLD_OUT	O	FL Driver Data Out
88	CENTER POP-UP	O	Control Signal
89	MD3	I	Model Code 3
90	MD2	I	Model Code 2
91	KEY2	I	Key 2 Line Input
92	ACS	I	Auto Calibration Signal
93	SENSE1	I	D-Amp Sense Input Signal 1
94	DES2	I	DVD Region Setting
95	DES1	I	Tuner Region Setting
96	AVSS	-	GND (0V)
97	KEY1	I	Key 1 Line Input
98	VREF	-	Voltage Supply (+5V)
99	AVCC	-	Voltage Supply (+5V)
100	NC	-	No Connection

23.2. IC1701 (MFI341S2095): IC Ipod Video

Pin No.	Terminal Name	I/O	Function
1	VCC	-	Supply Voltage, Positive Terminal
2	XIN	I	32.768 kHz Crystal Oscillator
3	XOUT	O	32.768 kHz External Clock Source
4	CLK_EN	I	CLOCK_OUT Enable (Active High)

Pin No.	Terminal Name	I/O	Function
5	NC	-	No Connection
6	NC	-	No Connection
7	I2C_SCL	I/O	I2C Clock
8	I2C_ADDR_0	I	I2C Clock Slave Address Selection
9	I2C_ADDR_1	I	I2C Clock Slave Address Selection
10	I2C_ADDR_2	I	I2C Clock Slave Address Selection
11	CP_READY	O	CP Ready to Receive Next Instruction (Active High)
12	MODE0	I	Operating Voltage Selection
13	MODE1	I	Communication Mode Selection
14	NC	-	No Connection
15	12C_SDA	I/O	I2C Data
16	MODE2	I	Communication Mode Selection
17	ROSC	I	Connect via 100 kΩ 1% resistor to VCC
18	NC	-	No Connection
19	NC	-	No Connection
20	NC	-	No Connection
21	NC	-	No Connection
22	NC	-	No Connection
23	NC	-	No Connection
24	NC	-	No Connection
25	NC	-	No Connection
26	NC	-	No Connection
27	NC	-	No Connection
28	NC	-	No Connection
29	NC	-	No Connection
30	NC	-	No Connection
31	NC	-	No Connection
32	NC	-	No Connection
33	NC	-	No Connection
34	NC	-	No Connection
35	NC	-	No Connection
36	NC	-	No Connection
37	NC	-	No Connection
38	nRESET	I	CP Reset (Active Low)
39	VSS	-	Supply Voltage, Negative Terminal
40	VCC	-	Supply Voltage, Positive Terminal

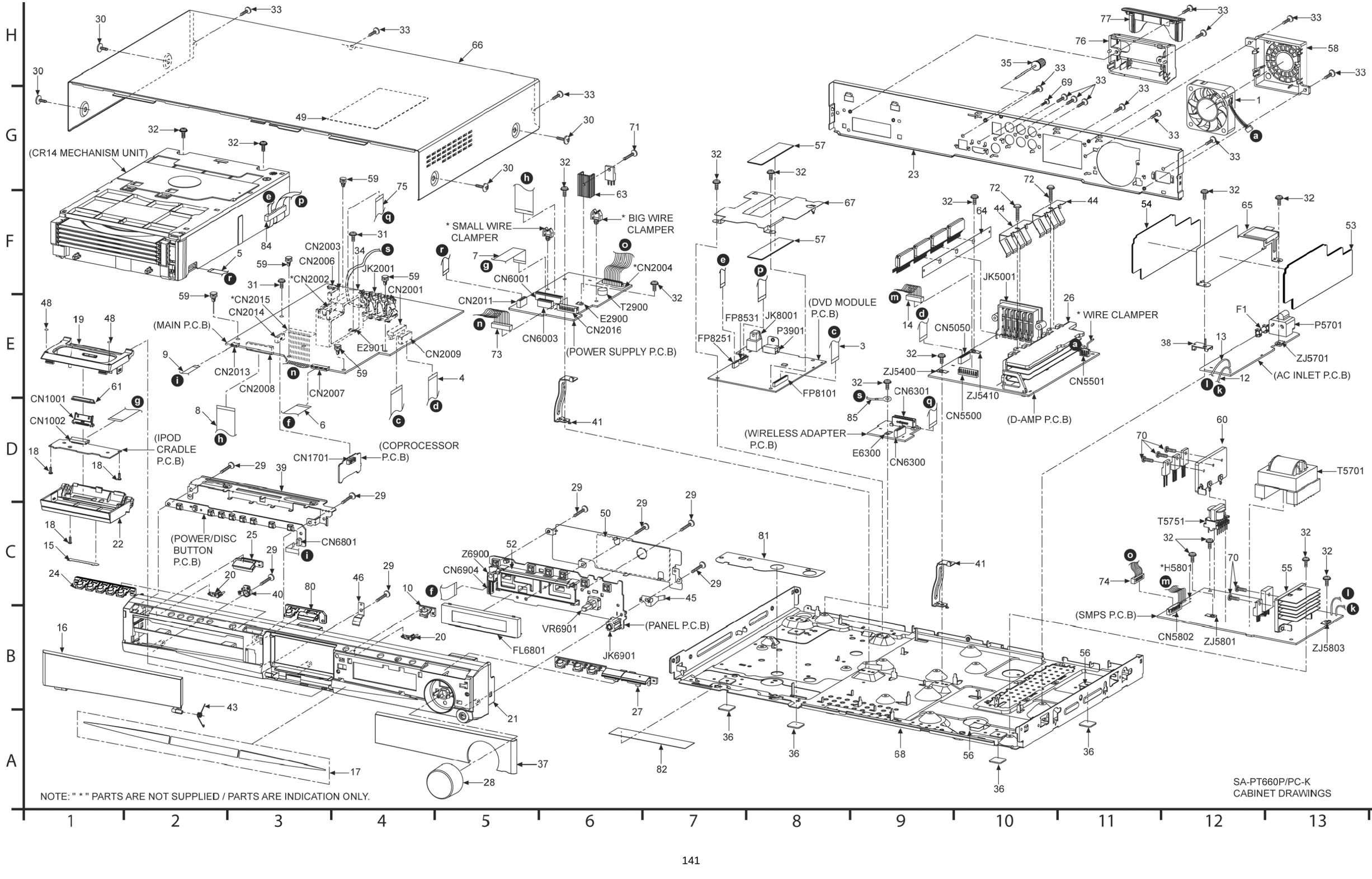
23.3. IC6901(C0HBB0000057): IC FL Driver

Pin No.	Terminal Name	I/O	Function
1	LED2	O	Led Drive Output
2	LED3	-	Led Drive Output
3	LED4	-	Led Drive Output
4	LED5	-	Led Drive Output
5	OSC	I	Oscillator Input
6	DOUT	-	Data Output
7	DIN	I	Data Input
8	CLK	I	Clock Input
9	STB	I	Serial Interface Strobe
10	K1	-	Key Data Input 1 (No Connection)
11	K2	-	Key Data Input 2 (No Connection)
12	GND	-	GND
13	VCC	-	Power Supply (+5V)
14	P18	O	Segment Output 18
15	P17	O	Segment Output 17
16	P16	O	Segment Output 16

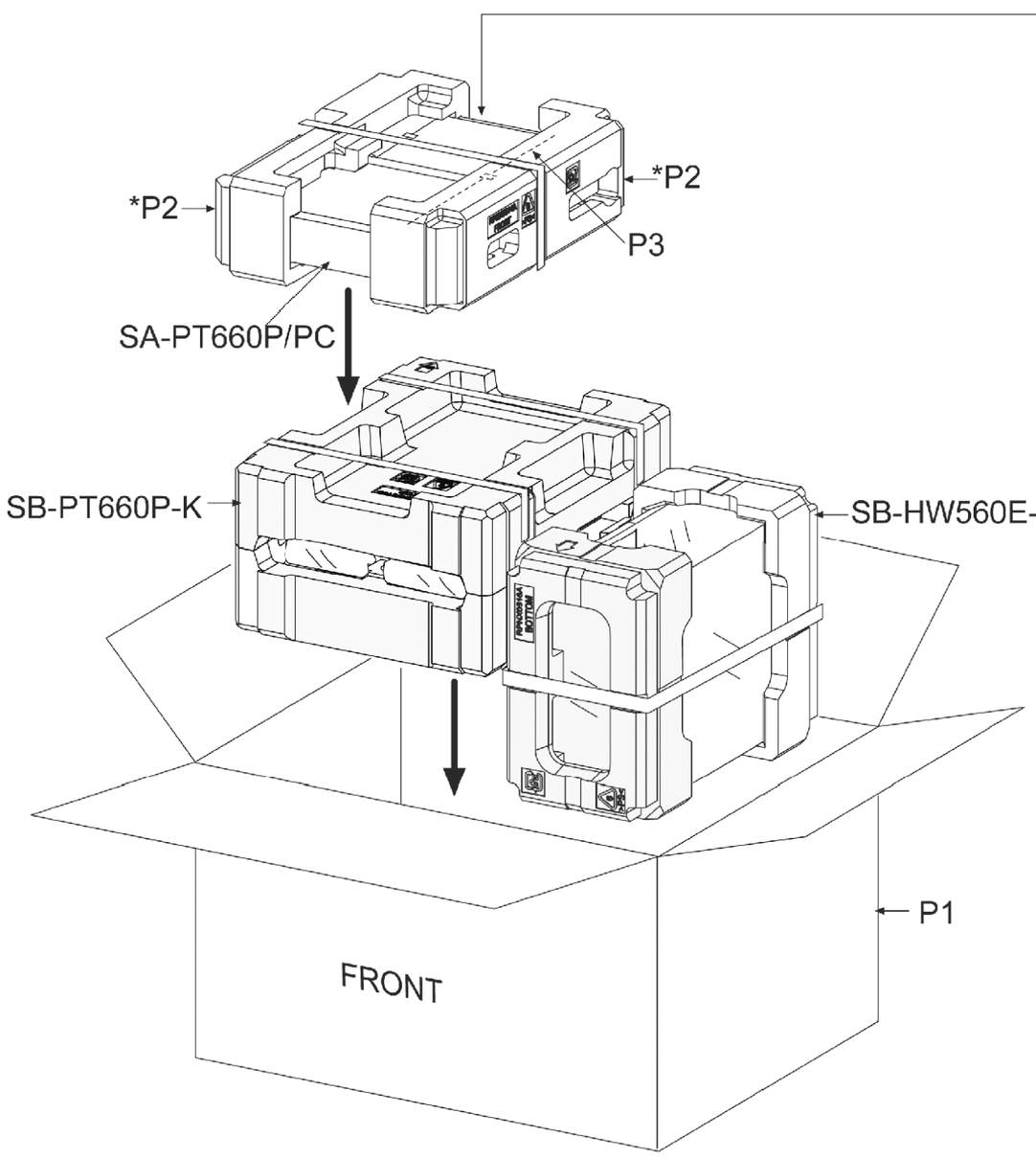
Pin No.	Terminal Name	I/O	Function
17	P15	O	Segment Output 15
18	P14	O	Segment Output 14
19	P13	O	Segment Output 13
20	P12	O	Segment Output 12
21	P11	O	Segment Output 11
22	P10	O	Segment Output 10
23	P9	O	Segment Output 9
24	P8	O	Segment Output 8
25	P7	O	Segment Output 7
26	P6	O	Segment Output 6
27	P5	O	Segment Output 5
28	P4	O	Segment Output 4
29	P3	O	Segment Output 3
30	-VP	-	Voltage Supply
31	P2	O	Segment Output 2
32	P1	O	Segment Output 1
33	G1	O	Grid Segment Output 1
34	G2	O	Grid Segment Output 2
35	G3	O	Grid Segment Output 3
36	G4	O	Grid Segment Output 4
37	G5	O	Grid Segment Output5
38	G6	O	Grid Segment Output 6
39	G7	O	Grid Segment Output7
40	G8	O	Grid Segment Output 8
41	G9	O	Grid Segment Output 9
42	G10	O	Grid Segment Output 10
43	VCC	-	Voltage Supply (+5V)
44	GND	-	GND

24 Exploded Views

24.1. Cabinet Parts Location



24.2. Packaging



ACCESSORIES BAG

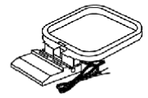
A1 REMOTE CONTROL

A2 AC CORD

A3 OI BOOK

A4 FM INDOOR ANTENNA

A5 VIDEO CABLE


A6 AM LOOP ANTENNA

*P2 — POLYFOAM LEFT
*P2 — POLYFOAM RIGHT

SC-PT660P/PC-K
PACKAGING DRAWINGS

25 Replacement Parts List

Notes:

- Important safety notice:

  Components identified by ⚠ mark have special characteristics important for safety purpose.

  Furthermore, special parts which have purposes of fire-retardant (resistors), high-quality sound (capacitors), low-noise (resistors), etc. are used.

  When replacing any of components, be sure to use only manufacturer's specified parts shown in the parts list.
- Warning: This product uses a laser diode. Refer to caution statements.
- Resistance values are in ohms, unless specified otherwise, 1K=1,000 (OHM), 1M=1,000K (OHM).
- The parenthesized indications in the Remarks columns specify the model names and areas. (Refer to the cover page)
- The marking (RTL) indicates the retention time is limited for this item. After the discontinuation of this assembly in production, it will no longer be available.
- Parts mentioned [M] are supplied from PAVCSG.
- Parts mentioned [SPG] are supplied from PAVC.
- Reference for O/I book languages are as follows:

Ar:	Arablic	Du:	Dutch	It:	Italian	Sp:	Spanish
Cf:	Canadian French	En:	English	Ko:	Korean	Sw:	Swedish
Cz:	Czech	Fr:	French	Po:	Polish	Co:	Traditional Chinese
Da:	Danish	Ge:	German	Ru:	Russian	Cn	Simplified Chinese
Pe:	Persian	Ur:	Ukrainian	Pr:	Portuguese		

25.1. Component Parts List

Ref. No.	Part No.	Part Name & Description	Remarks
		CABINET AND CHASSIS	
1	L6FAJCCH0007	FAN MOTOR	[M]
3	REEX0814	50P FFC CABLE (MAIN TO B/E)	[M]
4	REEX0815	17P FFC CABLE (MAIN TO DAMP)	[M]
5	REEX0818	11P FFC CABLE (MOTOR TO MAIN)	[M]
6	REEX0820	17P FFC CABLE (PANEL TO MAIN)	[M]
7	REEX0821	14P FFC CABLE (IPOD TO RELAY)	[M]
8	REEX0822	16P FFC CABLE (RELAY TO MAIN)	[M]
9	REEX0823	4P FFC CABLE (POWER PCB TO MAIN)	[M]
10	RGUX0744-KJ	SUBWOOFER BUTTON	[M]
12	REXX0640-J	BLACK WIRE (AC TO SMPS)	[M] ⚠
13	REXX0641-J	RED WIRE (AC TO SMPS)	[M] ⚠
14	REXX0651	8P WIRE (SMPS TO DAMP)	[M]
15	RGB0164-S	PANASONIC BADGE	[M]
16	RGKX0443D-KJ	DVD LID	[M]
17	RGKX0489-S1	FRONT ORNAMENT	[M]
18	VHD1224-1	SCREW	[M]
19	RYPX0258-K1	CRADLE UNIT	[M]
20	RGLX0160-Q	LIGHTING CHIP	[M]
21	RGPX0352-K2	FRONT PANEL	[M] P
21	RGPX0352A-K1	FRONT PANEL	[M] PC
22	RGPX0335K-K1	CRADLE CHASSIS	[M]
23	RGRX0067KA1A	REAR PANEL	[M] P ⚠
23	RGRX0067K-B1	REAR PANEL	[M] PC ⚠
24	RGUX0743-K	5 DISC BUTTON	[M]
25	RGUX0742A-K1J	POWER BUTTON	[M]
26	RXXX0085-1J	HEATSINK UNIT A	[M]
27	RGUX0745-KJ	OPERATION BUTTON	[M]
28	RGWX0104-K	VOLUME KNOB	[M]
29	RHD26046	SCREW	[M]
30	RHD30007-K2J	SCREW	[M]
31	RHD30090-1	SCREW	[M]
32	RHD30111-3	SCREW	[M]
33	RHD30119-S	SCREW	[M]
34	ENG06842QRF	TUNER PACK	[M]
35	RHD30070	SCREW	[M]
36	RKA0059-K	LEG RUBBER	[M]
37	RKWX0279-QJ	FL WINDOW	[M]
38	RMAX0118-1	PCB BRACKET	[M]
39	RMAX0129-2	PANEL ANGLE	[M]
40	RMAX0130	DVD LID HOLDER	[M]
41	RMAX0131	MAIN PCB BRACKET B	[M]
43	RMBX0075-1	DOOR SPRING	[M]
44	RMC0465	TR SPRING	[M]
45	RMCX0042	EARTH SPRING	[M]
46	RMCX0055	SPRING PLATE	[M]
48	RMGX0050	CRADLE RUBBER	[M]
49	RMNX0207	SMPS PCB INSULATOR	[M]
50	RXQX0077-1	FL SHIELD PLATE UNIT	[M]
52	RMNX0260	FL HOLDER	[M]
53	RMNX0282A	AC-IN PC SHEET A	[M]
54	RMNX0282B	AC-IN PC SHEET B	[M]
55	RXXX0104	HEATSINK UNIT B	[M]
56	RXQX0041	CUSHION ASSY	[M]
57	RMNX0286	HDMI PC SHEET	[M]
58	RMQX0233-K	FAN COVER	[M]
59	RMR0502A-W	PCB SUPPORT	[M]
60	RXXX0105	HEATSINK UNIT C	[M]
61	RMVX0117-K	CONNECTOR COVER	[M]
63	RMYX0191	HEATSINK EXTRUSSION	[M]
64	RMZX0038	IC INSULATOR	[M]
65	RSCX0188	AC-IN SHIELD PLATE UNIT	[M]
66	RKMX0141-K	TOP CABINET	[M] ⚠
67	RSCX0191	SHIELD	[M]
68	RMKX0144A-2	BOTTOM CHASSIS	[M]
69	XSN3+4FJ	SCREW	[M]
70	XTB3+10JFJ	SCREW	[M]
71	XTB3+8JFJ	SCREW	[M]
72	XTW3+8TFJ	SCREW	[M]
73	REXX0653-J	13P WIRE (MAIN TO RELAY)	[M]
74	REXX0639-J	12P WIRE (RELAY TO SMPS)	[M]
75	REEX0811-1	14P FFC WIRE (WIRELESS TO MAIN)	[M]
76	RMKX0127-K1	TRANSMITTER CHASSIS	[M]
77	RMVX0109-K1	TRANSMITTER CHASSIS COVER	[M]
80	RGUX0746-K	EXCHANGE BUTTON	[M]
81	RMNX0288	BTM CHASSIS PC SHEET	[M]
82	RMNX0295	BTM CHASSIS PC SHEET B	[M]
84	J0KD00000126	FERRITE CORE	[M] ⚠
85	REXX0696	GROUND WIRE	[M]
		PRINTED CIRCUIT BOARDS	
PCB1	REPX0620B	DVD MODULE P.C.B	[M] (RTL)
PCB2	REPX0621C	D-AMP P.C.B	[M] (RTL)
PCB3	REPX0622A	SMPS P.C.B	[M] (RTL) ⚠
PCB4	REPX0622A	AC INLET P.C.B	[M] (RTL) ⚠
PCB5	REPX0624A	MAIN P.C.B	[M] (RTL) P
	REPX0624B	MAIN P.C.B	[M] (RTL) PC
PCB6	REPX0624A	POWER SUPPLY P.C.B	[M] (RTL) P
	REPX0624B	POWER SUPPLY P.C.B	[M] (RTL) PC
PCB7	REPX0655K	PANEL P.C.B	[M] (RTL)
PCB8	REPX0655K	POWER / DISC BUTTON P.C.B	[M] (RTL)
PCB9	REPX0631A	IPOD CRADLE P.C.B	[M] (RTL)
PCB10	REPX0657B-A	CO-PROCESSOR P.C.B	[M] (RTL)
		INTERGRATED CIRCUITS	
IC1701	MFI341S2095	IC IPOD VIDEO	[M]
IC1702	C0CBCBC00140	IC +3.3V REGULATOR	[M]
IC2001	RFKWPT760P	IC SYSTEM CONTROL	[M]
IC2002	C0CBCBC00140	IC REGULATOR	[M]
IC2101	C1AB00002735	IC ASP	[M]
IC2102	C0AABB000125	IC OP-AMP	[M]
IC2104	C0ABBB000230	IC OP-AMP	[M]
IC2105	C0JBAR000540	IC DUAL 4CH MULTIPLEXER	[M]
IC2501	C0ABBB000230	IC CENTER POP-UP OP-AMP	[M]
IC2801	C9ZB00000461	IC VIDEO BUFFER	[M]
IC2900	C0DAAYY00042	IC SWITCHING REGULATOR	[M]
IC2903	C0DAAMH00012	IC SWITCHING REGULATOR	[M]
IC3901	MN864702A	IC HDMI TRANSMITTER	[M]
IC3952	C0CBCDC00063	IC TERMINAL FUNCTION REGULATOR	[M]
IC5000	C1BA00000487	IC AUDIO DIGITAL POWER AMP	[M]
IC5200	C1BA00000487	IC AUDIO DIGITAL POWER AMP	[M]
IC5300	C1BA00000487	IC AUDIO DIGITAL POWER AMP	[M]
IC5400	C1BA00000487	IC AUDIO DIGITAL POWER AMP	[M]
IC5500	C0JBAB000902	IC INVERTER GATE	[M]
IC5501	C0JBAF000716	IC D-FLIP FLOP	[M]
IC5701	C5HACYY00004	IC SWITCHING REGULATOR	[M]
IC5799	MIP4110MSSCF	IC SWITCHING REGULATOR	[M]
IC5801	C0DABFC00002	IC SHUNT REGULATOR	[M]
IC5899	C0DAEMZ00001	IC SHUNT REGULATOR	[M]
IC6101	C0ABBB000230	IC IPOD DIFFERENTIAL AMP	[M]
IC6601	C0ABAA000114	IC ISOLATION AMP	[M]
IC6602	C0CBCDG00003	IC +5V REGULATOR	[M]
IC6901	C0HBB0000057	IC FL DISPLAY	[M]
IC8001	MN2DS0018DP	IC DV5.0 LSI	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
IC8051	C3ABPY000011	IC 64M SDRAM	[M]
IC8111	C0DBZYY00018	IC +3.3V DC-DC CONVERTER	[M]
IC8151	C0DBEHG00006	IC +1.2V REGULATOR	[M]
IC8251	C0GBG0000048	IC MOTOR DRIVE	[M]
IC8421	C0FBBK000044	IC AUDIO DAC	[M]
IC8422	C0FBAK000026	IC AUDIO DAC	[M]
IC8601	C0EBA0000039	IC RESET	[M]
IC8606	C0EBE0000456	IC RESET	[M]
IC8611	C3EBGC000056	IC EEPROM	[M]
IC8651	RFKWMH32B323	IC FLASH ROM	[SPG]
IC8691	C0JBAA000502	IC AND GATE	[M]
IC8695	C0JBAA000502	IC AND GATE	[M]
IC8701	C0JBAB000907	IC INVERTER GATE	[M]
IC8901	C0JBAA000501	IC AND GATE	[M]
IC9001	C0JBAZ001251	IC LATCH	[M]
IC9002	C0JBAZ001251	IC LATCH	[M]
		TRANSISTORS	
Q1702	B1CFGC000004	TRANSISTOR	[M]
Q1704	B1CFGC000004	TRANSISTOR	[M]
Q2002	B1GBCFJJ0051	TRANSISTOR	[M]
Q2003	B1GBCFLL0037	TRANSISTOR	[M]
Q2004	2SD0601AHL	TRANSISTOR	[M]
Q2005	B1ADCE000012	TRANSISTOR	[M]
Q2006	B1GBCFJN0033	TRANSISTOR	[M]
Q2007	B1GBCFJJ0051	TRANSISTOR	[M]
Q2013	B1GBCFJJ0051	TRANSISTOR	[M]
Q2030	B1GBCFJJ0051	TRANSISTOR	[M]
Q2096	2SD0601AHL	TRANSISTOR	[M]
Q2097	2SD0601AHL	TRANSISTOR	[M]
Q2101	B1HBECA00004	TRANSISTOR	[M]
Q2102	B1HBECA00004	TRANSISTOR	[M]
Q2103	B1GDCFGA0018	TRANSISTOR	[M]
Q2104	B1HBECA00004	TRANSISTOR	[M]
Q2203	B1GDCFGA0018	TRANSISTOR	[M]
Q2501	B1GBCFLL0037	TRANSISTOR	[M]
Q2502	B1GBCFLL0037	TRANSISTOR	[M]
Q2801	B1GBCFJN0033	TRANSISTOR	[M]
Q2900	B1BABK000001	TRANSISTOR	[M]
Q2901	B1BCCG000002	TRANSISTOR	[M]
Q2902	B1ADCF000001	TRANSISTOR	[M]
Q2903	B1BACG000023	TRANSISTOR	[M]
Q2904	B1BACG000023	TRANSISTOR	[M]
Q2909	B1ABCF000176	TRANSISTOR	[M]
Q2919	B1ABCF000176	TRANSISTOR	[M]
Q2921	B1ADCF000001	TRANSISTOR	[M]
Q2922	B1GBCFJJ0051	TRANSISTOR	[M]
Q2923	B1GBCFJJ0051	TRANSISTOR	[M]
Q2924	B1GBCFJJ0051	TRANSISTOR	[M]
Q3901	2SD1819A0L	TRANSISTOR	[M]
Q3902	B1CFHA000002	TRANSISTOR	[M]
Q3903	B1CFHA000002	TRANSISTOR	[M]
Q3941	2SD1819A0L	TRANSISTOR	[M]
Q3942	2SD1819A0L	TRANSISTOR	[M]
Q3943	2SD1819A0L	TRANSISTOR	[M]
Q5101	B1ABCF000176	TRANSISTOR	[M]
Q5102	B1ABCF000176	TRANSISTOR	[M]
Q5601	B1ABCF000176	TRANSISTOR	[M]
Q5602	B1ABCF000176	TRANSISTOR	[M]
Q5603	B1ADCE000012	TRANSISTOR	[M]
Q5604	B1ABCF000176	TRANSISTOR	[M]
Q5640	B1BACD000018	TRANSISTOR	[M]
Q5641	2SC584500L	TRANSISTOR	[M]
Q5642	2SC584500L	TRANSISTOR	[M]
Q5644	2SC584500L	TRANSISTOR	[M]
Q5720	2SC3940ARA	TRANSISTOR	[M]
Q5721	2SA207700L	TRANSISTOR	[M]
Q5722	B1ABCF000176	TRANSISTOR	[M]
Q5802	B1ABCF000176	TRANSISTOR	[M]
Q5803	2SC3940ARA	TRANSISTOR	[M]
Q5860	2SA207700L	TRANSISTOR	[M]
Q5861	B1ABCF000176	TRANSISTOR	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
Q5862	B1ABCF000176	TRANSISTOR	[M]
Q5898	B1ABCF000176	TRANSISTOR	[M]
Q6910	B1GBCFJN0033	TRANSISTOR	[M]
Q8321	2SB1218ARL	TRANSISTOR	[M]
Q8325	2SB1218ARL	TRANSISTOR	[M]
Q8331	2SB1218ARL	TRANSISTOR	[M]
Q8335	2SB1218ARL	TRANSISTOR	[M]
Q8341	2SB1218ARL	TRANSISTOR	[M]
Q8551	2SD1819A0L	TRANSISTOR	[M]
Q8552	B1ADGB000008	TRANSISTOR	[M]
Q8561	2SD1819A0L	TRANSISTOR	[M]
Q8562	B1ADGB000008	TRANSISTOR	[M]
Q8563	B1CFHA000002	TRANSISTOR	[M]
Q8564	B1CFHA000002	TRANSISTOR	[M]
Q8565	2SD1819A0L	TRANSISTOR	[M]
QR5801	UNR221400L	TRANSISTOR	[M]
QR5802	B1GDCFGA0018	TRANSISTOR	[M]
QR5810	B1GBCFLL0037	TRANSISTOR	[M]
QR8111	XP0621400L	TRANSISTOR	[M]
QR8420	UNR521100L	TRANSISTOR	[M]
		DIODES	
D2002	B0EAKM000117	DIODE	[M]
D2003	B0EAKM000117	DIODE	[M]
D2005	B0ACCK000005	DIODE	[M]
D2007	B0ACCK000005	DIODE	[M]
D2008	B0ACCK000005	DIODE	[M]
D2601	B0ACCK000005	DIODE	[M]
D2602	B0ACCK000005	DIODE	[M]
D2751	B0ACCK000005	DIODE	[M]
D2752	B0ACCK000005	DIODE	[M]
D2753	B0BC5R000009	DIODE	[M]
D2901	B0BC035A0007	DIODE	[M]
D2903	B0EAMM000057	DIODE	[M]
D2904	B0JCPD000025	DIODE	[M]
D2906	B0JAME000029	DIODE	[M]
D2908	B0EAMM000057	DIODE	[M]
D2909	MAZ82400HL	DIODE	[M]
D2912	B0BC3R400001	DIODE	[M]
D2913	B0JCPD000025	DIODE	[M]
D2915	B0ACCK000005	DIODE	[M]
D2944	B0ACCK000005	DIODE	[M]
D2945	B0ACCK000005	DIODE	[M]
D2946	B0BC7R500001	DIODE	[M]
D2947	B0BC010A0007	DIODE	[M]
D2948	B0BC7R500001	DIODE	[M]
D2949	B0BC5R000009	DIODE	[M]
D2951	B0BC010A0007	DIODE	[M]
D2962	B0BC5R000009	DIODE	[M]
D2963	B0BC5R000009	DIODE	[M]
D3901	MA2J72800L	DIODE	[M]
D5001	B0HCMM000019	DIODE	[M]
D5002	B0HCMM000019	DIODE	[M]
D5003	B0HCMM000019	DIODE	[M]
D5004	B0HCMM000019	DIODE	[M]
D5201	B0HCMM000019	DIODE	[M]
D5202	B0HCMM000019	DIODE	[M]
D5203	B0HCMM000019	DIODE	[M]
D5204	B0HCMM000019	DIODE	[M]
D5301	B0HCMM000019	DIODE	[M]
D5302	B0HCMM000019	DIODE	[M]
D5303	B0HCMM000019	DIODE	[M]
D5304	B0HCMM000019	DIODE	[M]
D5401	B0HCMM000019	DIODE	[M]
D5402	B0HCMM000019	DIODE	[M]
D5403	B0HCMM000019	DIODE	[M]
D5404	B0HCMM000019	DIODE	[M]
D5501	MA2J11100L	DIODE	[M]
D5502	MA2J11100L	DIODE	[M]
D5503	MAZ80510ML	DIODE	[M]
D5640	MAZ81200ML	DIODE	[M]
D5643	MA2J11100L	DIODE	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
D5644	MA2J11100L	DIODE	[M]
D5645	MA2J11100L	DIODE	[M]
D5701	B0FBAR000041	DIODE	[M]
D5702	B0ZAZ0000052	DIODE	[M]
D5721	MAZ81800ML	DIODE	[M]
D5722	B0BC019A0007	DIODE	[M]
D5723	MA2J11100L	DIODE	[M]
D5724	MA2J11100L	DIODE	[M]
D5725	B0BC6R100010	DIODE	[M]
D5726	B0EAKM000117	DIODE	[M]
D5727	MA2J11100L	DIODE	[M]
D5728	MA2J11100L	DIODE	[M]
D5729	B0EAMM000057	DIODE	[M]
D5730	MA2J11100L	DIODE	[M]
D5731	B0EAMM000057	DIODE	[M]
D5732	B0BC035A0007	DIODE	[M]
D5793	B0HAMP000094	DIODE	[M]
D5797	MA2J72800L	DIODE	[M]
D5798	B0HAMP000094	DIODE	[M]
D5801	B0HBSM000043	DIODE	[M]
D5802	B0HBSM000043	DIODE	[M]
D5803	B0HFRJ000012	DIODE	[M]
D5804	B0EAMM000057	DIODE	[M]
D5805	B0EAMM000057	DIODE	[M]
D5806	MAZ80750ML	DIODE	[M]
D5807	MA2J11100L	DIODE	[M]
D5809	MA2J11100L	DIODE	[M]
D5896	B0EAMM000057	DIODE	[M]
D6910	B0BC2R4A0006	DIODE	[M]
D6911	B0BC5R000009	DIODE	[M]
D6913	B3ABA0000397	DIODE	[M]
D8211	MA2J11100L	DIODE	[M]
DZ5701	ERZV10V511CS	ZNR	[M] ⚠
		VARISTORS	
VA3901	EZAEG2A50AX	ESD SUPRESSOR	[M]
VA3902	EZAEG2A50AX	ESD SUPRESSOR	[M]
VA3903	EZAEG2A50AX	ESD SUPRESSOR	[M]
VA3904	EZAEG2A50AX	ESD SUPRESSOR	[M]
VA3905	EZAEG2A50AX	ESD SUPRESSOR	[M]
VA3906	EZAEG2A50AX	ESD SUPRESSOR	[M]
VA3907	EZAEG2A50AX	ESD SUPRESSOR	[M]
VA3908	EZAEG2A50AX	ESD SUPRESSOR	[M]
VA3909	EZJZ0V800AA	VARISTOR	[M]
VA3910	EZJZ0V800AA	VARISTOR	[M]
VA3911	EZJZ0V800AA	VARISTOR	[M]
VA3912	EZJZ0V800AA	VARISTOR	[M]
VA3913	EZJZ0V800AA	VARISTOR	[M]
		VARIABLE RESISTORS	
VR6901	EVEKE2F2524B	VOLUME JOG	[M]
		SWITCHES	
S6801	EVQ21405R	SW POWER	[M]
S6802	EVQ21405R	SW DISC 1	[M]
S6803	EVQ21405R	SW DISC 2	[M]
S6804	EVQ21405R	SW DISC 3	[M]
S6805	EVQ21405R	SW DISC 4	[M]
S6806	EVQ21405R	SW DISC 5	[M]
S6807	EVQ21405R	SW OPEN/CLOSE	[M]
S6808	EVQ21405R	SW DISC EXCHANGE	[M]
S6901	EVQ21405R	SW PLAY/MEMORY	[M]
S6902	EVQ21405R	SW TUNE DOWN	[M]
S6903	EVQ21405R	SW TUNE UP	[M]
S6904	EVQ21405R	SW STOP / -TUNE MODE / -FM MODE	[M]
S6905	EVQ21405R	SW BOOST	[M]
S6907	EVQ21405R	SW SELECTOR	[M]
PSW1	D4FB1R100009	SW	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
		CONNECTORS	
CN1001	MFI514S0117	30P CONNECTOR	[M]
CN1002	K1MN14BA0141	14P CONNECTOR	[M]
CN1701	K1KB06B00038	6P CONNECTOR	[M]
CN2001	K1MY50AA0029	50P CONNECTOR	[M]
CN2003	K1MN14AA0003	14P CONNECTOR	[M]
CN2006	K1MN07BA0004	7P FFC CONNECTOR	[M]
CN2007	K1MN17BA0005	17P CONNECTOR	[M]
CN2008	K1MN28AA0004	28P CONNECTOR	[M]
CN2009	K1MN17AA0004	17P CONNECTOR	[M]
CN2011	K1MN11AA0003	11P CONNECTOR	[M]
CN2013	K1MN04B00022	4P FFC CONNECTOR	[M]
CN2014	K1KA06AA0031	6P CONNECTOR	[M]
CN2016	K1KA13AA0194	13P CONNECTOR	[M]
CN5050	K1MN17AA0004	17P CONNECTOR	[M]
CN5500	K1KA08AA0180	8P CONNECTOR	[M]
CN5501	K1KA03AA0301	3P CONNECTOR	[M]
CN5802	K1KA11AA0194	11P CONNECTOR	[M]
CN6001	K1MN28AA0004	28P CONNECTOR	[M]
CN6003	K1MN14AA0003	14P CONNECTOR	[M]
CN6300	K1MN14AA0003	14P CONNECTOR	[M]
CN6301	K1MY22A00003	22P CONNECTOR	[M]
CN6801	K1MN04AA0003	4P CONNECTOR	[M]
CN6904	K1MN17AA0004	17P CONNECTOR	[M]
FP8101	K1MN50AA0082	50P CONNECTOR	[M]
FP8251	K1MN07AA0076	7P FFC CONNECTOR	[M]
FP8531	K1MY26AA0021	26P CONNECTOR	[M]
P3901	K1FY119E0002	HDMI CONNECTOR	[M]
		COILS & INDUCTORS	
L1001	J0JHC0000107	INDUCTOR	[M]
L1002	J0JHC0000107	INDUCTOR	[M]
L1003	J0JHC0000107	INDUCTOR	[M]
L1004	J0JHC0000107	INDUCTOR	[M]
L1005	J0JHC0000107	INDUCTOR	[M]
L1006	J0JHC0000107	INDUCTOR	[M]
L1007	J0JHC0000107	INDUCTOR	[M]
L1008	J0JHC0000107	INDUCTOR	[M]
L1009	J0JHC0000107	INDUCTOR	[M]
L1010	J0JHC0000107	INDUCTOR	[M]
L1011	J0JHC0000107	INDUCTOR	[M]
L2101	J0JBC0000015	INDUCTOR	[M]
L2201	J0JBC0000015	INDUCTOR	[M]
L2801	G0A101EA0017	CHOKE COIL	[M]
L2802	J0JBC0000015	INDUCTOR	[M]
L2803	J0JBC0000015	INDUCTOR	[M]
L2804	J0JBC0000015	INDUCTOR	[M]
L2805	J0JBC0000015	INDUCTOR	[M]
L2901	G0A220GA0026	CHOKE COIL	[M]
L2902	G0A101ZA0028	CHOKE COIL	[M]
L2903	G0A101ZA0028	CHOKE COIL	[M]
L2904	G0A101EA0017	CHOKE COIL	[M]
L2905	G0A100HA0023	CHOKE COIL	[M]
L2907	G0A220GA0026	CHOKE COIL	[M]
L2908	G0A220GA0026	CHOKE COIL	[M]
L2909	G0A100HA0023	CHOKE COIL	[M]
L2910	G0A220GA0026	CHOKE COIL	[M]
L2911	G0A200D00002	CHOKE COIL	[M]
L2912	G0A220GA0026	CHOKE COIL	[M]
L2913	G0A220GA0026	CHOKE COIL	[M]
L2914	G0A220GA0026	CHOKE COIL	[M]
L3903	G1BYYYC00026	COMMON MODE EMI FILTER	[M]
L3904	G1BYYYC00026	COMMON MODE EMI FILTER	[M]
L3905	G1BYYYC00026	COMMON MODE EMI FILTER	[M]
L3906	G1BYYYC00026	COMMON MODE EMI FILTER	[M]
L5000	G0A150L00003	CHOKE COIL	[M]
L5001	G0B9R5K00003	LINE FILTER	[M]
L5002	G0B9R5K00003	LINE FILTER	[M]
L5200	G0A150L00003	CHOKE COIL	[M]
L5201	G0B9R5K00003	LINE FILTER	[M]
L5300	G0A150L00003	CHOKE COIL	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
L5301	G0B9R5K00003	LINE FILTER	[M]
L5400	G0A150L00003	CHOKE COIL	[M]
L5401	G0B9R5K00003	LINE FILTER	[M]
L5402	G0B9R5K00003	LINE FILTER	[M]
L5500	J0JKB0000020	INDUCTOR	[M]
L5501	J0JKB0000020	INDUCTOR	[M]
L5702	G0B932H00001	LINE FILTER	[M]
L6901	J0JBC0000019	INDUCTOR	[M]
L6903	J0JBC0000019	INDUCTOR	[M]
L6910	J0JBC0000019	INDUCTOR	[M]
L6920	J0JBC0000019	INDUCTOR	[M]
L8001	G1C100M00049	INDUCTOR	[M]
L8201	G1C100M00049	INDUCTOR	[M]
L8301	G1C100M00049	INDUCTOR	[M]
L8302	G1C100M00049	INDUCTOR	[M]
L8303	G1C100M00049	INDUCTOR	[M]
L8330	G1C100M00049	INDUCTOR	[M]
L8501	G1C100M00049	INDUCTOR	[M]
L8550	G1C100M00049	INDUCTOR	[M]
LB3901	J0JHC0000045	INDUCTOR	[M]
LB3902	J0JHC0000045	INDUCTOR	[M]
LB3903	J0JCC0000042	INDUCTOR	[M]
LB3904	J0JCC0000042	INDUCTOR	[M]
LB3905	J0JCC0000042	INDUCTOR	[M]
LB3906	J0JCC0000042	INDUCTOR	[M]
LB3907	J0JHC0000045	INDUCTOR	[M]
LB3908	J0JHC0000045	INDUCTOR	[M]
LB8001	J0JHC0000045	INDUCTOR	[M]
LB8011	J0JHC0000045	INDUCTOR	[M]
LB8301	J0JCC0000308	INDUCTOR	[M]
LB8302	J0JCC0000308	INDUCTOR	[M]
LB8303	J0JCC0000308	INDUCTOR	[M]
LB8304	J0JCC0000308	INDUCTOR	[M]
LB8305	J0JCC0000308	INDUCTOR	[M]
LB8401	J0JCC0000308	INDUCTOR	[M]
LB8530	J0JHC0000045	INDUCTOR	[M]
LB8532	J0JDC0000045	INDUCTOR	[M]
LB8551	J0JDC0000045	INDUCTOR	[M]
LB8561	J0JDC0000045	INDUCTOR	[M]
LB8571	J0JDC0000045	INDUCTOR	[M]
LB8701	J0JCC0000308	INDUCTOR	[M]
LB8702	J0JCC0000308	INDUCTOR	[M]
LB8901	J0JCC0000308	INDUCTOR	[M]
		TRANSFORMERS	
T2900	G4D1A0000117	SWITCHING TRANSFORMER	[M] ⚠
T5701	ETS42BM18GAD	SWITCHING TRANSFORMER	[M] ⚠
T5751	ETS19AB256AG	SWITCHING TRANSFORMER	[M] ⚠
		COMPOMENT COMBINATION	
Z6900	B3RAD0000146	REMOTE SENSOR	[M]
ZA5701	K3GE1ZZ00001	FUSE HOLDER	[M]
ZA5702	K3GE1ZZ00001	FUSE HOLDER	[M]
		PHOTO COUPLERS	
PC5701	B3PBA0000402	PHOTO COUPLER	[M] ⚠
PC5702	B3PBA0000402	PHOTO COUPLER	[M] ⚠
PC5720	B3PBA0000402	PHOTO COUPLER	[M] ⚠
PC5799	B3PBA0000402	PHOTO COUPLER	[M] ⚠
		EARTH TERMINALS	
E2900	K4CZ01000027	TERMINAL	[M]
E2901	K4CZ01000027	TERMINAL	[M]
E6300	K4CZ01000027	TERMINAL	[M]
ZJ5400	K4CZ01000027	TERMINAL	[M]
ZJ5410	K4CZ01000027	TERMINAL	[M]
ZJ5701	K4CZ01000027	TERMINAL	[M]
ZJ5801	K4CZ01000027	TERMINAL	[M]
ZJ5803	K4CZ01000027	TERMINAL	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
		OSCILLATORS	
X1701	H0J327200099	CRYSTAL OSCILLATOR	[M]
X2001	H2B100500007	CRYSTAL OSCILLATOR	[M]
X5500	H2A6023A0011	CRYSTAL OSCILLATOR	[M]
X5501	H2A7003A0011	CRYSTAL OSCILLATOR	[M]
X8621	H0J270500085	CRYSTAL OSCILLATOR	[M]
		FL DISPLAY	
FL6801	A2BB00000169	FL DISPLAY	[M]
		FUSES	
F1	K5D802APA008	FUSE	[M] ⚠
		FUSE PROTECTOR	
FP2901	K5G401A00008	FUSE PROTECTOR	[M] ⚠
		THERMISTORS	
TH5701	D4CAA5R10001	THERMISTOR	[M] ⚠
TH5860	D4CC11040013	THERMISTOR	[M] ⚠
		JACKS	
JK2001	K2HA6YYG0001	JK	[M]
JK5001	K4AL12B00002	JK SPEAKER	[M]
JK6901	K2HC103A0031	JK HEADPHONE	[M]
JK8001	B3RAB0000056	JK OPTO DEVICE	[M]
P5701	K2AB2B000010	AC INLET	[M] ⚠
		CHIP JUMPERS	
K1	D0GBR00JA008	0 1/16W	[M]
K7	D0GBR00JA008	0 1/16W	[M]
K12	D0GBR00JA008	0 1/16W	[M] P
K13	D0GBR00JA008	0 1/16W	[M] PC
K2101	D0GBR00JA008	0 1/16W	[M]
K2201	D0GBR00JA008	0 1/16W	[M]
K2351	D0GBR00JA008	0 1/16W	[M]
K2451	D0GBR00JA008	0 1/16W	[M]
K2601	D0GBR00JA008	0 1/16W	[M]
K2802	D0GBR00JA008	0 1/16W	[M]
K2803	ERJ3GEY0R00V	0 1/10W	[M]
K2804	ERJ3GEY0R00V	0 1/10W	[M]
K3903	D0GBR00JA008	0 1/16W	[M]
K3905	ERJ2GE0R00X	0 1/16W	[M]
K3906	D0GBR00JA008	0 1/16W	[M]
K3907	D0GBR00JA008	0 1/16W	[M]
K5004	D0GDR00JA017	0 1/10W	[M]
K5202	D0GBR00JA008	0 1/16W	[M]
K5253	D0GBR00JA008	0 1/16W	[M]
K5302	D0GBR00JA008	0 1/16W	[M]
K5406	D0GBR00JA008	0 1/16W	[M]
K5500	D0GBR00JA008	0 1/16W	[M]
K8001	D0GBR00JA008	0 1/16W	[M]
K8006	D0GBR00JA008	0 1/16W	[M]
K8100	D0GBR00JA008	0 1/16W	[M]
K8251	D0GBR00JA008	0 1/16W	[M]
K8571	D0GBR00JA008	0 1/16W	[M]
LB8257	D0GBR00JA008	0 1/16W	[M]
LB8258	D0GBR00JA008	0 1/16W	[M]
LB8259	D0GBR00JA008	0 1/16W	[M]
LB8260	D0GBR00JA008	0 1/16W	[M]
LB8421	ERJ2GE0R00X	0 1/16W	[M]
LB8422	ERJ2GE0R00X	0 1/16W	[M]
LB8423	ERJ2GE0R00X	0 1/16W	[M]
LB8424	ERJ2GE0R00X	0 1/16W	[M]
LB8425	ERJ2GE0R00X	0 1/16W	[M]
LB8426	ERJ2GE0R00X	0 1/16W	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
LB8427	ERJ2GE0R00X	0 1/16W	[M]
LB8428	ERJ2GE0R00X	0 1/16W	[M]
LB8429	ERJ2GE0R00X	0 1/16W	[M]
LB8430	ERJ2GE0R00X	0 1/16W	[M]
LB8431	ERJ2GE0R00X	0 1/16W	[M]
LB8432	ERJ2GE0R00X	0 1/16W	[M]
LB8531	ERJ2GE0R00X	0 1/16W	[M]
LB8690	ERJ2GE0R00X	0 1/16W	[M]
W2214	ERJ8GEY0R00V	0 1/4W	[M]
W2216	ERJ8GEY0R00V	0 1/4W	[M]
W2706	D0GDR00JA017	0 1/10W	[M]
W2707	D0GBR00JA008	0 1/16W	[M]
W2708	D0GBR00JA008	0 1/16W	[M]
W2709	D0GDR00JA017	0 1/10W	[M]
W2710	D0GBR00JA008	0 1/16W	[M]
W2711	D0GDR00JA017	0 1/10W	[M]
W2712	D0GDR00JA017	0 1/10W	[M]
W2713	D0GBR00JA008	0 1/16W	[M]
W2714	D0GBR00JA008	0 1/16W	[M]
W2715	D0GDR00JA017	0 1/10W	[M]
W2716	D0GBR00JA008	0 1/16W	[M]
W2717	D0GBR00JA008	0 1/16W	[M]
W2718	D0GDR00JA017	0 1/10W	[M]
W2719	D0GBR00JA008	0 1/16W	[M]
W2720	D0GDR00JA017	0 1/10W	[M]
W2721	D0GDR00JA017	0 1/10W	[M]
W2723	D0GDR00JA017	0 1/10W	[M]
W2724	D0GBR00JA008	0 1/16W	[M]
W2725	D0GBR00JA008	0 1/16W	[M]
W2726	D0GDR00JA017	0 1/10W	[M]
W2727	D0GDR00JA017	0 1/10W	[M]
W2728	D0GDR00JA017	0 1/10W	[M]
W2729	D0GBR00JA008	0 1/16W	[M]
W2730	D0GDR00JA017	0 1/10W	[M]
W2732	D0GBR00JA008	0 1/16W	[M]
W2733	D0GDR00JA017	0 1/10W	[M]
W2734	D0GBR00JA008	0 1/16W	[M]
W2735	D0GDR00JA017	0 1/10W	[M]
W2737	D0GDR00JA017	0 1/10W	[M]
W2740	D0GDR00JA017	0 1/10W	[M]
W2741	D0GDR00JA017	0 1/10W	[M]
W2742	D0GBR00JA008	0 1/16W	[M]
W2743	D0GBR00JA008	0 1/16W	[M]
W2744	D0GDR00JA017	0 1/10W	[M]
W2747	D0GDR00JA017	0 1/10W	[M]
W2748	D0GDR00JA017	0 1/10W	[M]
W2751	D0GDR00JA017	0 1/10W	[M]
W2752	D0GBR00JA008	0 1/16W	[M]
W2753	D0GDR00JA017	0 1/10W	[M]
W2754	D0GDR00JA017	0 1/10W	[M]
W2766	D0GDR00JA017	0 1/10W	[M]
W2767	D0GBR00JA008	0 1/16W	[M]
W2768	D0GDR00JA017	0 1/10W	[M]
W2769	D0GBR00JA008	0 1/16W	[M]
W2770	D0GDR00JA017	0 1/10W	[M]
W2771	D0GBR00JA008	0 1/16W	[M]
W2773	D0GDR00JA017	0 1/10W	[M]
W2774	D0GBR00JA008	0 1/16W	[M]
W2775	D0GBR00JA008	0 1/16W	[M]
W2776	D0GDR00JA017	0 1/10W	[M]
W2777	D0GDR00JA017	0 1/10W	[M]
W2778	D0GDR00JA017	0 1/10W	[M]
W2779	D0GDR00JA017	0 1/10W	[M]
W2780	D0GBR00JA008	0 1/16W	[M]
W2781	D0GBR00JA008	0 1/16W	[M]
W2782	D0GDR00JA017	0 1/10W	[M]
W2783	D0GBR00JA008	0 1/16W	[M]
W2784	D0GBR00JA008	0 1/16W	[M]
W2785	D0GDR00JA017	0 1/10W	[M]
W2786	D0GDR00JA017	0 1/10W	[M]
W2788	D0GBR00JA008	0 1/16W	[M]
W2789	D0GBR00JA008	0 1/16W	[M]
W2790	D0GDR00JA017	0 1/10W	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
W2793	D0GBR00JA008	0 1/16W	[M]
W2794	D0GBR00JA008	0 1/16W	[M]
W2795	D0GBR00JA008	0 1/16W	[M]
W2796	D0GDR00JA017	0 1/10W	[M]
W2797	D0GDR00JA017	0 1/10W	[M]
W2798	D0GDR00JA017	0 1/10W	[M]
W2799	D0GDR00JA017	0 1/10W	[M]
W2800	D0GBR00JA008	0 1/16W	[M]
W2801	D0GBR00JA008	0 1/16W	[M]
W2802	D0GBR00JA008	0 1/16W	[M]
W2803	D0GDR00JA017	0 1/10W	[M]
W2804	D0GDR00JA017	0 1/10W	[M]
W2805	D0GDR00JA017	0 1/10W	[M]
W2806	D0GBR00JA008	0 1/16W	[M]
W2807	D0GBR00JA008	0 1/16W	[M]
W2808	D0GBR00JA008	0 1/16W	[M]
W2809	D0GBR00JA008	0 1/16W	[M]
W2810	D0GDR00JA017	0 1/10W	[M]
W2811	D0GDR00JA017	0 1/10W	[M]
W2812	D0GDR00JA017	0 1/10W	[M]
W2813	D0GDR00JA017	0 1/10W	[M]
W2814	D0GDR00JA017	0 1/10W	[M]
W2815	D0GDR00JA017	0 1/10W	[M]
W2816	D0GDR00JA017	0 1/10W	[M]
W2817	D0GBR00JA008	0 1/16W	[M]
W2818	D0GBR00JA008	0 1/16W	[M]
W2819	D0GDR00JA017	0 1/10W	[M]
W2831	D0GBR00JA008	0 1/16W	[M]
W2832	D0GBR00JA008	0 1/16W	[M]
W2833	D0GBR00JA008	0 1/16W	[M]
W2835	D0GBR00JA008	0 1/16W	[M]
W2837	D0GDR00JA017	0 1/10W	[M]
W2840	D0GBR00JA008	0 1/16W	[M]
W2841	D0GDR00JA017	0 1/10W	[M]
W2843	D0GDR00JA017	0 1/10W	[M]
W2844	D0GDR00JA017	0 1/10W	[M]
W2845	D0GBR00JA008	0 1/16W	[M]
W2846	D0GDR00JA017	0 1/10W	[M]
W2847	D0GDR00JA017	0 1/10W	[M]
W2850	D0GBR00JA008	0 1/16W	[M]
W2851	D0GBR00JA008	0 1/16W	[M]
W2852	D0GBR00JA008	0 1/16W	[M]
W2853	D0GBR00JA008	0 1/16W	[M]
W2854	D0GDR00JA017	0 1/10W	[M]
W2855	D0GDR00JA017	0 1/10W	[M]
W2856	D0GDR00JA017	0 1/10W	[M]
W2858	D0GBR00JA008	0 1/16W	[M]
W2861	D0GDR00JA017	0 1/10W	[M]
W2862	D0GDR00JA017	0 1/10W	[M]
W2863	D0GDR00JA017	0 1/10W	[M]
W2864	D0GDR00JA017	0 1/10W	[M]
W2865	D0GDR00JA017	0 1/10W	[M]
W2866	D0GBR00JA008	0 1/16W	[M]
W2868	ERJ8GEY0R00V	0 1/4W	[M]
W2891	ERJ8GEY0R00V	0 1/4W	[M]
W2892	ERJ8GEY0R00V	0 1/4W	[M]
W5007	D0GDR00JA017	0 1/10W	[M]
W5032	ERJ8GEY0R00V	0 1/4W	[M]
W5059	D0GDR00JA017	0 1/10W	[M]
W5071	D0GBR00JA008	0 1/16W	[M]
W5780	D0GDR00JA017	0 1/10W	[M]
W5801	D0GBR00JA008	0 1/16W	[M]
W5803	D0GDR00JA017	0 1/10W	[M]
W5804	D0GBR00JA008	0 1/16W	[M]
W5805	D0GDR00JA017	0 1/10W	[M]
W5806	D0GDR00JA017	0 1/10W	[M]
W5807	ERJ6GEY0R00V	0 1/8W	[M]
W6128	D0GDR00JA017	0 1/10W	[M]
W6129	D0GDR00JA017	0 1/10W	[M]
W6225	ERJ8GEY0R00V	0 1/4W	[M]
W6226	ERJ8GEY0R00V	0 1/4W	[M]
W6302	D0GDR00JA017	0 1/10W	[M]
W6401	D0GBR00JA008	0 1/16W	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
W6404	D0GDR00JA017	0 1/10W	[M]
W6405	D0GDR00JA017	0 1/10W	[M]
W6406	D0GBR00JA008	0 1/16W	[M]
W6407	D0GBR00JA008	0 1/16W	[M]
W6408	D0GBR00JA008	0 1/16W	[M]
W6409	D0GDR00JA017	0 1/10W	[M]
W6700	D0GBR00JA008	0 1/16W	[M]
W6701	D0GDR00JA017	0 1/10W	[M]
W6702	D0GDR00JA017	0 1/10W	[M]
W6703	D0GBR00JA008	0 1/16W	[M]
W6704	D0GBR00JA008	0 1/16W	[M]
W6705	D0GBR00JA008	0 1/16W	[M]
W6707	D0GBR00JA008	0 1/16W	[M]
W6708	D0GBR00JA008	0 1/16W	[M]
W6709	D0GBR00JA008	0 1/16W	[M]
W6710	D0GBR00JA008	0 1/16W	[M]
W6712	D0GDR00JA017	0 1/10W	[M]
W6713	D0GDR00JA017	0 1/10W	[M]
W6714	D0GBR00JA008	0 1/16W	[M]
W6715	D0GDR00JA017	0 1/10W	[M]
W6716	D0GDR00JA017	0 1/10W	[M]
W6717	D0GDR00JA017	0 1/10W	[M]
W6718	D0GDR00JA017	0 1/10W	[M]
W6719	D0GDR00JA017	0 1/10W	[M]
W6720	D0GBR00JA008	0 1/16W	[M]
W7300	D0GBR00JA008	0 1/16W	[M]
		PACKING MATERIALS	
P1	RPGX1828	PACKING CASE	[M] P
P1	RPGX1829-1	PACKING CASE	[M] PC
P2	RPNX0514-3	POLYFOAM (MAIN SET)	[M]
P3	RPFX0058-1J	MIRAMAT BAG	[M]
		ACCESSORIES	
A1	N2QAYB000210	REMOTE CONTROL	[M]
A1-1	RKK-HTR0051K	R/C BATTERY COVER	[M]
A2	K2CB2CB00021	AC CORD	[M] ⚠
A3	RQTX0094-P	O/I BOOK (En)	[M]
A3	RQTX0095-C	O/I BOOK (Cf)	[M] PC
A4	RSA0007-M	FM INDOOR ANTENNA	[M]
A5	K2KA2BA00001	VIDEO CABLE	[M]
A6	N1DAAAA00002	AM LOOP ANTENNA	[M]
		RESISTORS	
LB8691	D0GA101JA023	100 1/16W	[M]
LB8692	D0GA101JA023	100 1/16W	[M]
LB8693	D0GA101JA023	100 1/16W	[M]
R1001	ERJ3GEYJ101V	100 1/10W	[M]
R1002	ERJ3GEYJ101V	100 1/10W	[M]
R1003	ERJ3GEYJ104V	100K 1/10W	[M]
R1004	ERJ3GEYJ104V	100K 1/10W	[M]
R1005	ERJ3GEYF753V	75K 1/10W	[M]
R1006	ERJ3GEYF753V	75K 1/10W	[M]
R1007	ERJ3GEYF513V	51K 1/10W	[M]
R1008	ERJ3GEYF513V	51K 1/10W	[M]
R1009	ERJ3GEYJ151V	150 1/10W	[M]
R1010	ERJ3GEYJ151V	150 1/10W	[M]
R1011	ERJ3GEY0R00V	0 1/10W	[M]
R1012	ERJ3GEY0R00V	0 1/10W	[M]
R1013	ERJ3GEYJ102V	1K 1/10W	[M]
R1702	D0GB472JA008	4.7K 1/16W	[M]
R1703	ERJ3GEYF104V	100K 1/10W	[M]
R1704	D0GB103JA007	10K 1/10W	[M]
R1707	D0GB221JA007	220 1/10W	[M]
R1711	D0GB221JA007	220 1/10W	[M]
R1712	D0GB221JA007	220 1/10W	[M]
R1713	D0GB221JA007	220 1/10W	[M]
R1714	D0GB103JA007	10K 1/10W	[M]
R1715	D0GB103JA007	10K 1/10W	[M]
R1726	D0GB221JA007	220 1/10W	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
R1727	D0GB221JA007	220 1/10W	[M]
R1728	D0GB221JA007	220 1/10W	[M]
R1730	D0GB104JA008	100K 1/16W	[M]
R1731	D0GBR00JA008	0 1/16W	[M]
R2000	D0GB221JA007	220 1/10W	[M]
R2001	D0GB102JA008	1K 1/16W	[M]
R2002	D0GB103JA007	10K 1/10W	[M]
R2003	D0GB221JA007	220 1/10W	[M]
R2004	D0GB221JA007	220 1/10W	[M]
R2005	D0GB221JA007	220 1/10W	[M]
R2006	D0GB221JA007	220 1/10W	[M]
R2007	D0GB103JA007	10K 1/10W	[M]
R2008	D0GB473JA008	47K 1/16W	[M]
R2010	D0GB102JA008	1K 1/16W	[M]
R2011	D0GB221JA007	220 1/10W	[M]
R2012	D0GB103JA007	10K 1/10W	[M]
R2013	D0GBR00JA008	0 1/16W	[M]
R2014	D0GB473JA008	47K 1/16W	[M]
R2015	D0GB272JA008	2.7K 1/16W	[M]
R2016	D0GB472JA008	4.7K 1/16W	[M]
R2017	D0GB273JA007	27K 1/10W	[M]
R2019	D0GB473JA008	47K 1/16W	[M]
R2020	D0GB103JA007	10K 1/10W	[M]
R2021	D0GB563JA008	56K 1/16W	[M]
R2022	D0GB103JA007	10K 1/10W	[M]
R2023	D0GB473JA008	47K 1/16W	[M]
R2024	D0GB273JA007	27K 1/10W	[M]
R2025	D0GB104JA008	100K 1/16W	[M]
R2026	D0GB221JA007	220 1/10W	[M]
R2029	D0GB221JA007	220 1/10W	[M]
R2030	D0GB473JA008	47K 1/16W	[M]
R2031	D0GB221JA007	220 1/10W	[M]
R2032	D0GB473JA008	47K 1/16W	[M]
R2033	D0GB223JA008	22K 1/16W	[M]
R2034	D0GB473JA008	47K 1/16W	[M]
R2036	D0GB221JA007	220 1/10W	[M]
R2037	D0GB473JA008	47K 1/16W	[M]
R2038	D0GB473JA008	47K 1/16W	[M]
R2039	D0GB473JA008	47K 1/16W	[M]
R2040	D0GB103JA007	10K 1/10W	[M]
R2041	D0GB473JA008	47K 1/16W	[M]
R2043	D0GB153JA007	15K 1/10W	[M]
R2045	D0GB103JA007	10K 1/10W	[M]
R2046	D0GB222JA008	2.2K 1/16W	[M]
R2047	D0GB222JA008	2.2K 1/16W	[M]
R2048	ERJ3GEYJ203V	20K 1/10W	[M]
R2050	D0GB102JA008	1K 1/16W	[M]
R2051	D0GB563JA008	56K 1/16W	[M]
R2052	D0GB221JA007	220 1/10W	[M]
R2053	D0GB221JA007	220 1/10W	[M]
R2054	D0GB221JA007	220 1/10W	[M]
R2056	D0GB221JA007	220 1/10W	[M]
R2058	D0GBR00JA008	0 1/16W	[M]
R2059	D0GB103JA007	10K 1/10W	[M]
R2060	D0GB221JA007	220 1/10W	[M]
R2061	D0GB221JA007	220 1/10W	[M]
R2062	D0GB221JA007	220 1/10W	[M]
R2065	D0GB221JA007	220 1/10W	[M]
R2066	D0GB221JA007	220 1/10W	[M]
R2067	D0GB473JA008	47K 1/16W	[M]
R2068	D0GB221JA007	220 1/10W	[M]
R2069	D0GB221JA007	220 1/10W	[M]
R2070	D0GB273JA007	27K 1/10W	[M]
R2071	D0GB101JA007	100 1/10W	[M]
R2072	D0GB101JA007	100 1/10W	[M]
R2073	D0GB101JA007	100 1/10W	[M]
R2075	D0GB221JA007	220 1/10W	[M]
R2077	D0GB103JA007	10K 1/10W	[M]
R2078	D0GB221JA007	220 1/10W	[M]
R2079	D0GB221JA007	220 1/10W	[M]
R2080	D0GB103JA007	10K 1/10W	[M]
R2081	D0GB103JA007	10K 1/10W	[M]
R2082	D0GBR00JA008	0 1/16W	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
R2084	D0GB473JA008	47K 1/16W	[M]
R2085	D0GB472JA008	4.7K 1/16W	[M]
R2086	D0GB223JA008	22K 1/16W	[M]
R2087	D0GB223JA008	22K 1/16W	[M]
R2089	D0GBR00JA008	0 1/16W	[M]
R2090	D0GB153JA007	15K 1/10W	[M]
R2092	D0GB221JA007	220 1/10W	[M]
R2093	D0GB103JA007	10K 1/10W	[M]
R2095	D0GB103JA007	10K 1/10W	[M]
R2096	D0GB473JA008	47K 1/16W	[M]
R2097	D0GB472JA008	4.7K 1/16W	[M]
R2098	D0GB225JA008	2.2M 1/16W	[M]
R2099	D0GB104JA008	100K 1/16W	[M]
R2100	D0GB332JA007	3.3K 1/10W	[M]
R2101	D0GB103JA007	10K 1/10W	[M]
R2102	D0GB332JA007	3.3K 1/10W	[M]
R2103	D0GB273JA007	27K 1/10W	[M]
R2105	D0GB222JA008	2.2K 1/16W	[M]
R2106	D0GB563JA008	56K 1/16W	[M]
R2111	D0GB472JA008	4.7K 1/16W	[M]
R2112	D0GB562JA008	5.6K 1/16W	[M]
R2113	D0GB562JA008	5.6K 1/16W	[M]
R2114	D0GB562JA008	5.6K 1/16W	[M]
R2115	D0GB222JA008	2.2K 1/16W	[M]
R2116	D0GB102JA008	1K 1/16W	[M]
R2117	D0GB273JA007	27K 1/10W	[M]
R2118	D0GB563JA008	56K 1/16W	[M]
R2119	D0GB152JA007	1.5K 1/10W	[M]
R2120	D0GB102JA008	1K 1/16W	[M]
R2121	D0GB152JA007	1.5K 1/10W	[M]
R2125	D0GB102JA008	1K 1/16W	[M]
R2126	D0GB682JA008	6.8K 1/16W	[M]
R2127	D0GB153JA007	15K 1/10W	[M]
R2128	D0GB153JA007	15K 1/10W	[M]
R2129	D0GB333JA008	33K 1/16W	[M]
R2130	D0GB102JA008	1K 1/16W	[M]
R2131	D0GB182JA008	1.8K 1/16W	[M]
R2133	D0GB103JA007	10K 1/10W	[M]
R2134	D0GB222JA008	2.2K 1/16W	[M]
R2135	D0GB563JA008	56K 1/16W	[M]
R2136	D0GB473JA008	47K 1/16W	[M]
R2145	D0GBR00JA008	0 1/16W	[M]
R2160	D0GB102JA008	1K 1/16W	[M]
R2161	D0GB473JA008	47K 1/16W	[M]
R2164	D0GB103JA007	10K 1/10W	[M]
R2165	D0GB103JA007	10K 1/10W	[M]
R2166	D0GBR00JA008	0 1/16W	[M]
R2170	D0GB222JA008	2.2K 1/16W	[M]
R2171	D0GB273JA007	27K 1/10W	[M]
R2172	D0GB182JA008	1.8K 1/16W	[M]
R2173	D0GB273JA007	27K 1/10W	[M]
R2174	D0GB392JA008	3.9K 1/16W	[M]
R2175	D0GB222JA008	2.2K 1/16W	[M]
R2176	D0GB223JA008	22K 1/16W	[M]
R2177	D0GB220JA008	22 1/16W	[M]
R2178	D0GB220JA008	22 1/16W	[M]
R2179	D0GB220JA008	22 1/16W	[M]
R2180	D0GB220JA008	22 1/16W	[M]
R2181	D0GB472JA008	4.7K 1/16W	[M]
R2182	D0GB100JA007	10 1/10W	[M]
R2183	D0GB122JA007	1.2K 1/10W	[M]
R2184	D0GB562JA008	5.6K 1/16W	[M]
R2185	D0GB122JA007	1.2K 1/10W	[M]
R2186	D0GB102JA008	1K 1/16W	[M]
R2187	D0GB332JA007	3.3K 1/10W	[M]
R2189	D0GB222JA008	2.2K 1/16W	[M]
R2190	D0GB472JA008	4.7K 1/16W	[M]
R2191	D0GB332JA007	3.3K 1/10W	[M]
R2192	D0GB182JA008	1.8K 1/16W	[M]
R2193	D0GB821JA008	820 1/16W	[M]
R2194	D0GB103JA007	10K 1/10W	[M]
R2200	D0GB332JA007	3.3K 1/10W	[M]
R2201	D0GB103JA007	10K 1/10W	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
R2202	D0GB332JA007	3.3K 1/10W	[M]
R2203	D0GB273JA007	27K 1/10W	[M]
R2205	D0GB222JA008	2.2K 1/16W	[M]
R2206	D0GB563JA008	56K 1/16W	[M]
R2207	D0GB222JA008	2.2K 1/16W	[M]
R2211	D0GB472JA008	4.7K 1/16W	[M]
R2212	D0GB562JA008	5.6K 1/16W	[M]
R2213	D0GB562JA008	5.6K 1/16W	[M]
R2214	D0GB562JA008	5.6K 1/16W	[M]
R2215	D0GB222JA008	2.2K 1/16W	[M]
R2216	D0GB102JA008	1K 1/16W	[M]
R2219	D0GB152JA007	1.5K 1/10W	[M]
R2220	D0GB102JA008	1K 1/16W	[M]
R2221	D0GB152JA007	1.5K 1/10W	[M]
R2225	D0GB102JA008	1K 1/16W	[M]
R2226	D0GB682JA008	6.8K 1/16W	[M]
R2227	D0GB153JA007	15K 1/10W	[M]
R2228	D0GB153JA007	15K 1/10W	[M]
R2229	D0GB333JA008	33K 1/16W	[M]
R2230	D0GB102JA008	1K 1/16W	[M]
R2233	D0GB103JA007	10K 1/10W	[M]
R2235	D0GB563JA008	56K 1/16W	[M]
R2236	D0GB473JA008	47K 1/16W	[M]
R2245	D0GBR00JA008	0 1/16W	[M]
R2260	D0GB102JA008	1K 1/16W	[M]
R2261	D0GB473JA008	47K 1/16W	[M]
R2264	D0GB103JA007	10K 1/10W	[M]
R2265	D0GB103JA007	10K 1/10W	[M]
R2266	D0GBR00JA008	0 1/16W	[M]
R2270	D0GB222JA008	2.2K 1/16W	[M]
R2271	D0GB563JA008	56K 1/16W	[M]
R2273	D0GB273JA007	27K 1/10W	[M]
R2274	D0GB392JA008	3.9K 1/16W	[M]
R2275	D0GB222JA008	2.2K 1/16W	[M]
R2276	D0GB223JA008	22K 1/16W	[M]
R2277	D0GB220JA008	22 1/16W	[M]
R2278	D0GB220JA008	22 1/16W	[M]
R2279	D0GB220JA008	22 1/16W	[M]
R2280	D0GB220JA008	22 1/16W	[M]
R2281	D0GB472JA008	4.7K 1/16W	[M]
R2282	D0GB100JA007	10 1/10W	[M]
R2283	D0GB122JA007	1.2K 1/10W	[M]
R2284	D0GB562JA008	5.6K 1/16W	[M]
R2285	D0GB122JA007	1.2K 1/10W	[M]
R2286	D0GB102JA008	1K 1/16W	[M]
R2288	D0GB332JA007	3.3K 1/10W	[M]
R2289	D0GB222JA008	2.2K 1/16W	[M]
R2290	D0GB472JA008	4.7K 1/16W	[M]
R2291	D0GB332JA007	3.3K 1/10W	[M]
R2292	D0GB182JA008	1.8K 1/16W	[M]
R2293	D0GB821JA008	820 1/16W	[M]
R2294	D0GB103JA007	10K 1/10W	[M]
R2300	D0GB122JA007	1.2K 1/10W	[M]
R2301	D0GB223JA008	22K 1/16W	[M]
R2302	D0GB562JA008	5.6K 1/16W	[M]
R2303	D0GB822JA008	8.2K 1/16W	[M]
R2304	D0GB123JA007	12K 1/10W	[M]
R2310	D0GB102JA008	1K 1/16W	[M]
R2312	D0GB152JA007	1.5K 1/10W	[M]
R2339	D0GB152JA007	1.5K 1/10W	[M]
R2400	D0GB122JA007	1.2K 1/10W	[M]
R2401	D0GB223JA008	22K 1/16W	[M]
R2402	D0GB562JA008	5.6K 1/16W	[M]
R2403	D0GB822JA008	8.2K 1/16W	[M]
R2404	D0GB123JA007	12K 1/10W	[M]
R2410	D0GB102JA008	1K 1/16W	[M]
R2412	D0GB152JA007	1.5K 1/10W	[M]
R2439	D0GB152JA007	1.5K 1/10W	[M]
R2500	D0GB103JA007	10K 1/10W	[M]
R2501	D0GB123JA007	12K 1/10W	[M]
R2502	D0GB472JA008	4.7K 1/16W	[M]
R2503	D0GB822JA008	8.2K 1/16W	[M]
R2504	D0GB103JA007	10K 1/10W	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
R2505	D0GBR00JA008	0 1/16W	[M]
R2506	D0GB821JA008	820 1/16W	[M]
R2507	D0GB821JA008	820 1/16W	[M]
R2508	D0GB821JA008	820 1/16W	[M]
R2509	D0GB821JA008	820 1/16W	[M]
R2510	D0GB272JA008	2.7K 1/16W	[M]
R2511	D0GB821JA008	820 1/16W	[M]
R2512	D0GB182JA008	1.8K 1/16W	[M]
R2551	D0GB182JA008	1.8K 1/16W	[M]
R2552	D0GB473JA008	47K 1/16W	[M]
R2553	D0GB102JA008	1K 1/16W	[M]
R2554	D0GB102JA008	1K 1/16W	[M]
R2555	D0GB473JA008	47K 1/16W	[M]
R2556	D0GB684JA008	680K 1/16W	[M]
R2557	D0GB271JA008	270 1/16W	[M]
R2558	D0GB821JA008	820 1/16W	[M]
R2559	D0GB223JA008	22K 1/16W	[M]
R2600	D0GB102JA008	1K 1/16W	[M]
R2601	D0GB123JA007	12K 1/10W	[M]
R2609	D0GB472JA008	4.7K 1/16W	[M]
R2610	D0GB102JA008	1K 1/16W	[M]
R2611	D0GB103JA007	10K 1/10W	[M]
R2612	D0GB273JA007	27K 1/10W	[M]
R2613	D0GB103JA007	10K 1/10W	[M]
R2614	D0GB273JA007	27K 1/10W	[M]
R2617	D0GB182JA008	1.8K 1/16W	[M]
R2626	D0GB122JA007	1.2K 1/10W	[M]
R2627	D0GB683JA008	68K 1/16W	[M]
R2661	D0GB221JA007	220 1/10W	[M]
R2662	D0GB221JA007	220 1/10W	[M]
R2668	D0GBR00JA008	0 1/16W	[M]
R2704	D0GB561JA008	560 1/16W	[M]
R2705	D0GB101JA007	100 1/10W	[M]
R2757	D0GB563JA008	56K 1/16W	[M]
R2764	D0GB473JA008	47K 1/16W	[M]
R2804	D0GB102JA008	1K 1/16W	[M]
R2809	D0GB750JA008	75 1/16W	[M]
R2812	D0GB750JA008	75 1/16W	[M]
R2813	D0GB750JA008	75 1/16W	[M]
R2816	D0GB750JA008	75 1/16W	[M]
R2862	D0GB103JA007	10K 1/10W	[M]
R2863	D0GB103JA007	10K 1/10W	[M]
R2864	D0GB153JA007	15K 1/10W	[M]
R2865	D0GB182JA008	1.8K 1/16W	[M] PC
R2865	D0GB821JA008	820 1/16W	[M] P
R2871	D0GDR00JA017	0 1/10W	[M] P
R2871	ERJ6GEYJ221V	220 1/10W	[M] PC
R2900	D0GB562JA008	5.6K 1/16W	[M]
R2902	D0GB470JA008	47 1/16W	[M]
R2903	D0GB182JA008	1.8K 1/16W	[M]
R2905	D0GB390JA008	39 1/16W	[M]
R2906	ERJ3GEYF682V	6.8K 1/10W	[M]
R2907	D0GB272JA008	2.7K 1/16W	[M]
R2908	D0GB561JA008	560 1/16W	[M]
R2909	D0GB393JA008	39K 1/16W	[M]
R2910	ERG2SJ470E	47 2W	[M]
R2911	D0GB392JA008	3.9K 1/16W	[M]
R2912	D0GB272JA008	2.7K 1/16W	[M]
R2913	ERX2SJ1R5E	1.5 2W	[M]
R2914	D0GB473JA008	47K 1/16W	[M]
R2915	ERX2SJ1R5E	1.5 2W	[M]
R2919	D0GB102JA008	1K 1/16W	[M]
R2920	D0GB392JA008	3.9K 1/16W	[M]
R2921	D0GB391JA008	390 1/16W	[M]
R2922	ERJ3GEYF102V	1K 1/10W	[M]
R2923	ERJ3GEYF122V	1.2K 1/10W	[M]
R2930	D0GB472JA008	4.7K 1/16W	[M]
R2935	D0GB472JA008	4.7K 1/16W	[M]
R2936	D0GB471JA008	470 1/16W	[M]
R2937	D0GB393JA008	39K 1/16W	[M]
R2938	D0GB333JA008	33K 1/16W	[M]
R2941	D0GB223JA008	22K 1/16W	[M]
R2946	D0GB330JA008	33 1/16W	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
R2947	D0GB472JA008	4.7K 1/16W	[M]
R2948	D0GB472JA008	4.7K 1/16W	[M]
R2952	D0GB392JA008	3.9K 1/16W	[M]
R2953	D0GB561JA008	560 1/16W	[M]
R2954	ERG2SJ470E	47 2W	[M]
R2975	D0GB153JA007	15K 1/10W	[M]
R2976	D0GB103JA007	10K 1/10W	[M]
R2977	D0GB1R0JA007	1.0 1/10W	[M]
R3901	ERJ2GEJ511X	510 1/4W	[M]
R3902	D0GA103JA023	10K 1/16W	[M]
R3903	D0GA103JA023	10K 1/16W	[M]
R3904	D0GA472JA023	4.7K 1/16W	[M]
R3905	ERJ2GEJ202X	2.0K 1/4W	[M]
R3906	D0GA472JA023	4.7K 1/16W	[M]
R3907	D0GA222JA023	2.2K 1/16W	[M]
R3921	ERJ2GE0R00X	0 1/4W	[M]
R3924	ERJ2GE0R00X	0 1/4W	[M]
R3925	D0GA103JA023	10K 1/16W	[M]
R3941	D0GA273JA023	27K 1/16W	[M]
R3942	ERJ2GEJ224X	220K 1/4W	[M]
R3943	D0GA104JA023	100K 1/16W	[M]
R3944	D0GA221JA023	220 1/16W	[M]
R3945	D0GA103JA023	10K 1/16W	[M]
R3946	ERJ2GEJ272X	2.7K 1/4W	[M]
R3947	D0GA103JA023	10K 1/16W	[M]
R5000	D0GB562JA008	5.6K 1/16W	[M]
R5001	D0GB562JA008	5.6K 1/16W	[M]
R5002	D0GB562JA008	5.6K 1/16W	[M]
R5003	D0GB562JA008	5.6K 1/16W	[M]
R5004	D0GF100JA014	10 1/8W	[M]
R5005	D0GF100JA014	10 1/8W	[M]
R5006	D0GZ220JA012	22 1W	[M]
R5007	D0GZ220JA012	22 1W	[M]
R5008	D0GB101JA007	100 1/10W	[M]
R5010	D0GF100JA014	10 1/8W	[M]
R5011	D0GF100JA014	10 1/8W	[M]
R5019	D0GB683JA008	68K 1/16W	[M]
R5020	D0GB124JA008	120K 1/16W	[M]
R5021	D0GB122JA007	1.2K 1/10W	[M]
R5022	D0GB122JA007	1.2K 1/10W	[M]
R5023	D0GB122JA007	1.2K 1/10W	[M]
R5030	D0GB562JA008	5.6K 1/16W	[M]
R5031	D0GB562JA008	5.6K 1/16W	[M]
R5032	D0GB562JA008	5.6K 1/16W	[M]
R5033	D0GB562JA008	5.6K 1/16W	[M]
R5034	D0GB562JA008	5.6K 1/16W	[M]
R5035	D0GB562JA008	5.6K 1/16W	[M]
R5036	D0GB562JA008	5.6K 1/16W	[M]
R5037	D0GB562JA008	5.6K 1/16W	[M]
R5103	D0GB562JA008	5.6K 1/16W	[M]
R5104	D0GB562JA008	5.6K 1/16W	[M]
R5110	D0GB223JA008	22K 1/16W	[M]
R5111	D0GB124JA008	120K 1/16W	[M]
R5113	D0GB683JA008	68K 1/16W	[M]
R5114	D0GB122JA007	1.2K 1/10W	[M]
R5115	D0GB122JA007	1.2K 1/10W	[M]
R5118	D0GB562JA008	5.6K 1/16W	[M]
R5119	D0GB562JA008	5.6K 1/16W	[M]
R5200	D0GF100JA014	10 1/8W	[M]
R5201	D0GF100JA014	10 1/8W	[M]
R5204	D0GB101JA007	100 1/10W	[M]
R5205	D0GB562JA008	5.6K 1/16W	[M]
R5206	D0GB562JA008	5.6K 1/16W	[M]
R5207	D0GB562JA008	5.6K 1/16W	[M]
R5208	D0GB562JA008	5.6K 1/16W	[M]
R5209	D0GZ220JA012	22 1W	[M]
R5210	D0GF100JA014	10 1/8W	[M]
R5211	D0GF100JA014	10 1/8W	[M]
R5217	D0GZ220JA012	22 1W	[M]
R5218	D0GB683JA008	68K 1/16W	[M]
R5228	D0GB124JA008	120K 1/16W	[M]
R5300	D0GZ220JA012	22 1W	[M]
R5302	D0GF100JA014	10 1/8W	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
R5304	D0GB101JA007	100 1/10W	[M]
R5305	D0GF100JA014	10 1/8W	[M]
R5306	D0GB562JA008	5.6K 1/16W	[M]
R5307	D0GB562JA008	5.6K 1/16W	[M]
R5308	D0GB562JA008	5.6K 1/16W	[M]
R5309	D0GB562JA008	5.6K 1/16W	[M]
R5310	D0GF100JA014	10 1/8W	[M]
R5311	D0GF100JA014	10 1/8W	[M]
R5317	D0GB122JA007	1.2K 1/10W	[M]
R5318	D0GB124JA008	120K 1/16W	[M]
R5319	D0GZ220JA012	22 1W	[M]
R5327	D0GB122JA007	1.2K 1/10W	[M]
R5328	D0GB683JA008	68K 1/16W	[M]
R5400	D0GZ220JA012	22 1W	[M]
R5402	D0GF100JA014	10 1/8W	[M]
R5404	D0GB101JA007	100 1/10W	[M]
R5405	D0GF100JA014	10 1/8W	[M]
R5410	D0GF100JA014	10 1/8W	[M]
R5411	D0GF100JA014	10 1/8W	[M]
R5419	D0GZ220JA012	22 1W	[M]
R5504	D0GB220JA008	22 1/16W	[M]
R5505	D0GB101JA007	100 1/10W	[M]
R5506	D0GB105JA008	1M 1/16W	[M]
R5507	D0GB105JA008	1M 1/16W	[M]
R5508	D0GB105JA008	1M 1/16W	[M]
R5510	ERG2SJ471E	470 2W	[M]
R5511	D0GB220JA008	22 1/16W	[M]
R5602	D0GB103JA007	10K 1/10W	[M]
R5603	D0GB103JA007	10K 1/10W	[M]
R5604	D0GB122JA007	1.2K 1/10W	[M]
R5606	D0GB103JA007	10K 1/10W	[M]
R5607	D0GB122JA007	1.2K 1/10W	[M]
R5608	D0GB103JA007	10K 1/10W	[M]
R5609	D0GB103JA007	10K 1/10W	[M]
R5610	D0GB122JA007	1.2K 1/10W	[M]
R5611	D0GB122JA007	1.2K 1/10W	[M]
R5636	D0AF392JA039	3.9K 1/2W	[M]
R5637	D0GB100JA007	10 1/10W	[M]
R5639	D0GB332JA007	3.3K 1/10W	[M]
R5640	D0GBR00JA008	0 1/16W	[M]
R5654	D0GB563JA008	56K 1/16W	[M]
R5655	D0GB103JA007	10K 1/10W	[M]
R5656	D0GB103JA007	10K 1/10W	[M]
R5657	D0GB103JA007	10K 1/10W	[M]
R5658	ERJ3GEYJ185V	1.8M 1/10W	[M]
R5659	D0GB104JA008	100K 1/16W	[M]
R5660	D0GB103JA007	10K 1/10W	[M]
R5670	D0GBR00JA008	0 1/16W	[M]
R5701	ERDS1TJ475B	4.7K 1W	[M]
R5702	ERJ1TYJ333U	33K 1W	[M]
R5703	ERJ1TYJ333U	33K 1W	[M]
R5704	D0GF394JA017	390K 1/8W	[M]
R5705	D0GF394JA017	390K 1/8W	[M]
R5720	D0GD220JA017	22 1/10W	[M]
R5721	D0GD103JA017	10K 1/10W	[M]
R5722	D0GD122JA017	1.2K 1/10W	[M]
R5723	D0GB102JA008	1K 1/16W	[M]
R5724	D0GD121JA017	120 1/10W	[M]
R5725	D0GBR00JA008	0 1/16W	[M]
R5726	ERX2LJ82MP	82m 2W	[M]
R5727	ERX2SZJR10P	0.1 2W	[M]
R5728	D0GB104JA008	100K 1/16W	[M]
R5729	D0GD103JA017	10K 1/10W	[M]
R5730	D0GB102JA008	1K 1/16W	[M]
R5731	D0GBR00JA008	0 1/16W	[M]
R5732	D0GB101JA007	100 1/10W	[M]
R5733	D0GB473JA008	47K 1/16W	[M]
R5750	D0GBR00JA008	0 1/16W	[M]
R5786	ERJ1TYJ204U	200K 1W	[M]
R5787	D0GB753JA007	75K 1/10W	[M]
R5795	ERJ6GEYJ433V	43K 1/10W	[M]
R5796	ERDS1FVJ222T	2.2K 1/2W	[M]
R5797	D0GD472JA017	4.7K 1/10W	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
R5798	D0GD100JA017	10 1/10W	[M]
R5800	ERJ6GEYJ123V	12K 1/10W	[M]
R5801	D0GD103JA017	10K 1/10W	[M]
R5802	ERJ3RBD272V	2.7K 1/16W	[M]
R5803	D0GDR00JA017	0 1/10W	[M]
R5804	ERJ6RBD473V	47K 10W	[M]
R5805	ERJ3RBD222V	2.2K 1/16W	[M]
R5806	D0GB153JA007	15K 1/10W	[M]
R5807	ERJ6GEYJ331V	330 1/10W	[M]
R5808	D0GD222JA017	2.2K 1/10W	[M]
R5809	ERJ6GEYJ331V	330 1/10W	[M]
R5810	D0GB331JA008	330 1/16W	[M]
R5811	ERJ8GEYJ152V	1.5K 1/8W	[M]
R5812	D0HB822ZA002	8.2K 1/16W	[M]
R5813	ERJ3RBD243V	24K 1/16W	[M]
R5814	D0GB822JA008	8.2K 1/16W	[M]
R5815	D0GB272JA008	2.7K 1/16W	[M]
R5816	ERJ8GEYJ152V	1.5K 1/8W	[M]
R5817	D0GB331JA008	330 1/16W	[M]
R5820	ERG2SJ910E	91 2W	[M]
R5821	ERG2SJ910E	91 2W	[M]
R5822	ERG2SJ910E	91 2W	[M]
R5823	ERG2SJ910E	91 2W	[M]
R5824	ERG2SJ910E	91 2W	[M]
R5825	D0GB102JA008	1K 1/16W	[M]
R5832	ERJ1TYJ222U	2.2K 1W	[M]
R5834	ERJ1TYJ222U	2.2K 1W	[M]
R5840	ERJ3GEYJ823V	82K 1/10W	[M]
R5841	ERJ3GEYJ124V	120K 1/10W	[M]
R5860	ERJ3GEYF103V	10K 1/10W	[M]
R5861	ERJ3GEYF302V	3K 1/10W	[M]
R5862	D0GD103JA017	10K 1/10W	[M]
R5863	D0GD103JA017	10K 1/10W	[M]
R5864	ERJ6GEYF103V	10K 1/10W	[M]
R5890	D0GB222JA008	2.2K 1/16W	[M]
R5891	ERJ3RBD333V	33K 1/16W	[M]
R5892	ERJ3RBD472V	4.7K 1/16W	[M]
R5893	ERJ3RBD393V	39K 1/16W	[M]
R5894	D0GB102JA008	1K 1/16W	[M]
R5895	D0GB101JA007	100 1/10W	[M]
R5896	D0GB104JA008	100K 1/16W	[M]
R5897	D0GB101JA007	100 1/10W	[M]
R6100	D0GB473JA008	47K 1/16W	[M]
R6101	D0GB103JA007	10K 1/10W	[M]
R6102	D0GB103JA007	10K 1/10W	[M]
R6103	D0GB103JA007	10K 1/10W	[M]
R6104	D0GB103JA007	10K 1/10W	[M]
R6105	D0GB103JA007	10K 1/10W	[M]
R6200	D0GB473JA008	47K 1/16W	[M]
R6201	D0GB103JA007	10K 1/10W	[M]
R6203	D0GB103JA007	10K 1/10W	[M]
R6204	D0GB103JA007	10K 1/10W	[M]
R6300	D0GB750JA008	75 1/16W	[M]
R6301	D0GB100JA007	10 1/10W	[M]
R6302	D0GB100JA007	10 1/10W	[M]
R6400	D0GB102JA008	1K 1/16W	[M]
R6403	ERJ3GEYF334V	330K 1/10W	[M]
R6404	ERJ3GEYF224V	220K 1/10W	[M]
R6601	D0GB102JA008	1K 1/16W	[M]
R6602	D0GB102JA008	1K 1/16W	[M]
R6801	D0GB102JA008	1K 1/16W	[M]
R6802	D0GB102JA008	1K 1/16W	[M]
R6803	D0GB122JA007	1.2K 1/10W	[M]
R6804	D0GB182JA008	1.8K 1/16W	[M]
R6805	D0GB222JA008	2.2K 1/16W	[M]
R6806	D0GB272JA008	2.7K 1/16W	[M]
R6807	D0GB472JA008	4.7K 1/16W	[M]
R6808	D0GBR00JA008	0 1/16W	[M]
R6901	D0GBR00JA008	0 1/16W	[M]
R6902	D0GB272JA008	2.7K 1/16W	[M]
R6903	D0GB122JA007	1.2K 1/10W	[M]
R6904	D0GB102JA008	1K 1/16W	[M]
R6905	D0GB102JA008	1K 1/16W	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
R6907	D0GB223JA008	22K 1/16W	[M]
R6909	D0GB223JA008	22K 1/16W	[M]
R6910	D0GBR00JA008	0 1/16W	[M]
R6912	D0GB182JA008	1.8K 1/16W	[M]
R6914	D0GB563JA008	56K 1/16W	[M]
R6916	D0GB680JA007	68 1/10W	[M]
R6917	D0GB680JA007	68 1/10W	[M]
R6918	D0GB223JA008	22K 1/16W	[M]
R6919	D0GB470JA008	47 1/16W	[M]
R6920	D0GB470JA008	47 1/16W	[M]
R6927	D0GB680JA007	68 1/10W	[M]
R6934	D0GB470JA008	47 1/16W	[M]
R6935	D0GB1R0JA007	1.0 1/10W	[M]
R6939	ERJ6GEYJ1R2V	1.2 1/10W	[M]
R6940	ERJ6GEYJ1R2V	1.2 1/10W	[M]
R6960	D0GB222JA008	2.2K 1/16W	[M]
R6961	D0GB331JA008	330 1/16W	[M]
R8001	D0GA103JA023	10K 1/16W	[M]
R8003	D0GA103JA023	10K 1/16W	[M]
R8011	D0GA220JA023	22 1/16W	[M]
R8012	D0GA220JA023	22 1/16W	[M]
R8013	D0GA220JA023	22 1/16W	[M]
R8025	D0GBR00JA008	0 1/16W	[M]
R8153	ERJ2RHD621X	620 1/32W	[M]
R8154	ERJ2RHD102X	1K 1/32W	[M]
R8211	D0GA103JA023	10K 1/16W	[M]
R8221	D0GA822JA023	8.2K 1/16W	[M]
R8225	D0GA822JA023	8.2K 1/16W	[M]
R8230	D0GA222JA023	2.2K 1/16W	[M]
R8231	D0GA752JA023	7.5K 1/16W	[M]
R8232	D0GA752JA023	7.5K 1/16W	[M]
R8251	D0GD6R8JA017	6.8 1/10W	[M]
R8261	D0GA823JA023	82K 1/16W	[M]
R8262	D0GA153JA023	15K 1/16W	[M]
R8263	D0GA823JA023	82K 1/16W	[M]
R8264	D0GA153JA023	15K 1/16W	[M]
R8311	ERJ2RHD242X	2.4K 1/32W	[M]
R8312	ERJ2RHD102X	1K 1/32W	[M]
R8313	ERJ2RHD153X	15K 1/32W	[M]
R8314	ERJ2RHD153X	15K 1/32W	[M]
R8321	ERJ3RBD201V	200 1/16W	[M]
R8323	D0GA330JA023	33 1/16W	[M]
R8324	D0GA102JA023	1K 1/16W	[M]
R8325	ERJ3RBD201V	200 1/16W	[M]
R8327	D0GA330JA023	33 1/16W	[M]
R8328	D0GA102JA023	1K 1/16W	[M]
R8331	ERJ3RBD201V	200 1/16W	[M]
R8333	D0GA330JA023	33 1/16W	[M]
R8334	D0GA102JA023	1K 1/16W	[M]
R8335	ERJ3RBD201V	200 1/16W	[M]
R8336	D0GA330JA023	33 1/16W	[M]
R8337	D0GA102JA023	1K 1/16W	[M]
R8341	ERJ3RBD201V	200 1/16W	[M]
R8342	D0GA330JA023	33 1/16W	[M]
R8343	D0GA102JA023	1K 1/16W	[M]
R8401	D0GA101JA023	100 1/16W	[M]
R8402	D0GA101JA023	100 1/16W	[M]
R8403	D0GA101JA023	100 1/16W	[M]
R8404	D0GA101JA023	100 1/16W	[M]
R8420	D0GA222JA023	2.2K 1/16W	[M]
R8421	ERJ2GEJ100X	10 1/4W	[M]
R8531	D0GA152JA023	1.5K 1/16W	[M]
R8532	D0GA222JA023	2.2K 1/16W	[M]
R8533	ERJ2GE0R00X	0 1/4W	[M]
R8534	D0GA103JA023	10K 1/16W	[M]
R8535	D0GA104JA023	100K 1/16W	[M]
R8536	D0GA103JA023	10K 1/16W	[M]
R8537	ERJ2GE0R00X	0 1/4W	[M]
R8538	ERJ2GE0R00X	0 1/4W	[M]
R8539	ERJ2GE0R00X	0 1/4W	[M]
R8540	D0GBR00JA008	0 1/16W	[M]
R8541	D0GA153JA023	15K 1/16W	[M]
R8551	ERJ2GE0R00X	0 1/4W	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
R8552	D0GA102JA023	1K 1/16W	[M]
R8553	D0GA102JA023	1K 1/16W	[M]
R8554	ERJ2GEJ680X	68 1/4W	[M]
R8555	D0GA2R2JA023	2.2 1/16W	[M]
R8556	D0GB560JA007	56 1/10W	[M]
R8557	D0GB510JA007	51 1/10W	[M]
R8558	D0GA473JA023	47K 1/16W	[M]
R8559	D0GA153JA023	15K 1/16W	[M]
R8561	ERJ2GE0R00X	0 1/4W	[M]
R8562	D0GA102JA023	1K 1/16W	[M]
R8563	D0GA102JA023	1K 1/16W	[M]
R8564	D0GA220JA023	22 1/16W	[M]
R8565	D0GA2R2JA023	2.2 1/16W	[M]
R8566	D0GB560JA007	56 1/10W	[M]
R8567	D0GB510JA007	51 1/10W	[M]
R8568	D0GA473JA023	47K 1/16W	[M]
R8601	D0GA104JA023	100K 1/16W	[M]
R8611	D0GA101JA023	100 1/16W	[M]
R8613	D0GA101JA023	100 1/16W	[M]
R8621	D0GA105JA023	1M 1/16W	[M]
R8622	ERJ2RHD102X	1K 1/32W	[M]
R9007	D0GA103JA023	10K 1/16W	[M]
R9023	D0GA103JA023	10K 1/16W	[M]
R9036	D0GA103JA023	10K 1/16W	[M]
R9037	D0GA103JA023	10K 1/16W	[M]
R9038	D0GA103JA023	10K 1/16W	[M]
R9040	D0GA103JA023	10K 1/16W	[M]
R9041	D0GA103JA023	10K 1/16W	[M]
R9042	D0GA103JA023	10K 1/16W	[M]
R9043	D0GA103JA023	10K 1/16W	[M]
R9044	D0GA103JA023	10K 1/16W	[M]
R9045	D0GA103JA023	10K 1/16W	[M]
R9046	D0GA103JA023	10K 1/16W	[M]
R9047	D0GA103JA023	10K 1/16W	[M]
R9048	D0GA103JA023	10K 1/16W	[M]
R9049	D0GA103JA023	10K 1/16W	[M]
R9055	D0GA472JA023	4.7K 1/16W	[M]
R9080	D0GA103JA023	10K 1/16W	[M]
R9083	D0GA470JA023	47 1/16W	[M]
R9084	D0GA470JA023	47 1/16W	[M]
R9085	D0GA470JA023	47 1/16W	[M]
R9086	D0GA470JA023	47 1/16W	[M]
R9087	D0GA470JA023	47 1/16W	[M]
R9088	D0GA470JA023	47 1/16W	[M]
R9099	ERJ2GE0R00X	0 1/4W	[M]
RX3707	D1H84714A043	CHIP RESISTOR NETWORK	[M]
RX3708	D1H84714A043	CHIP RESISTOR NETWORK	[M]
RX3901	D1H410120001	CHIP RESISTOR NETWORK	[M]
RX8001	D1H410320002	CHIP RESISTOR NETWORK	[M]
RX8011	D1H88204A043	CHIP RESISTOR NETWORK	[M]
RX8012	D1H88204A043	CHIP RESISTOR NETWORK	[M]
RX8013	D1H88204A043	CHIP RESISTOR NETWORK	[M]
RX8014	D1H88204A043	CHIP RESISTOR NETWORK	[M]
RX8015	D1H88204A043	CHIP RESISTOR NETWORK	[M]
RX8016	D1H88204A043	CHIP RESISTOR NETWORK	[M]
RX8017	D1H88204A043	CHIP RESISTOR NETWORK	[M]
RX8018	D1H422020001	CHIP RESISTOR NETWORK	[M]
RX8019	D1H422020001	CHIP RESISTOR NETWORK	[M]
RX8020	D1H422020001	CHIP RESISTOR NETWORK	[M]
RX8031	D1H447220001	CHIP RESISTOR NETWORK	[M]
RX8032	D1H447220001	CHIP RESISTOR NETWORK	[M]
RX8111	D1H422320002	CHIP RESISTOR NETWORK	[M]
RX8401	D1H410120001	CHIP RESISTOR NETWORK	[M]
RX8402	D1H410120001	CHIP RESISTOR NETWORK	[M]
RX8531	D1H456020001	CHIP RESISTOR NETWORK	[M]
RX8532	D1H85604A043	CHIP RESISTOR NETWORK	[M]
RX8533	D1H456020001	CHIP RESISTOR NETWORK	[M]
RX8534	D1H456020001	CHIP RESISTOR NETWORK	[M]
RX8611	D1H447220001	CHIP RESISTOR NETWORK	[M]
RX8691	D1H410320002	CHIP RESISTOR NETWORK	[M]
RX9014	D1H85604A043	CHIP RESISTOR NETWORK	[M]
RX9015	D1H85604A043	CHIP RESISTOR NETWORK	[M]
RX9016	D1H85604A043	CHIP RESISTOR NETWORK	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
RX9017	D1H85604A043	CHIP RESISTOR NETWORK	[M]
RX9018	D1H447220001	CHIP RESISTOR NETWORK	[M]
RX9020	D1H447220001	CHIP RESISTOR NETWORK	[M]
		CAPACITORS	
C1001	F1H1H104A013	0.1uF 50V	[M]
C1002	F1H1H104A013	0.1uF 50V	[M]
C1003	F1H1H104A013	0.1uF 50V	[M]
C1004	F1H1H104A013	0.1uF 50V	[M]
C1701	F1H1H104A013	0.1uF 50V	[M]
C1702	F2G1C470A076	47uF 16V	[M]
C1703	F2G1C470A076	47uF 16V	[M]
C1704	F1H1H104A013	0.1uF 50V	[M]
C2000	F1H1H104A013	0.1uF 50V	[M]
C2001	F1H1H104A013	0.1uF 50V	[M]
C2002	F1H1H104A013	0.1uF 50V	[M]
C2003	ECEA1EKS220B	22uF 25V	[M]
C2006	ECEA1HKS2R2B	2.2uF 50V	[M]
C2007	F1H1H104A013	0.1uF 50V	[M]
C2008	ECEA0JKS101B	100uF 6.3V	[M]
C2009	F1H1H104A013	0.1uF 50V	[M]
C2010	F1H1H331A013	330pF 50V	[M]
C2011	F1H1H331A013	330pF 50V	[M]
C2012	F1H1H331A013	330pF 50V	[M]
C2013	F1H1H223A219	0.022uF 50V	[M]
C2014	ECEA1EKS4R7B	4.7uF 25V	[M]
C2015	ECJ1VB1H221K	220pF 50V	[M]
C2016	ECJ1VB1H221K	220pF 50V	[M]
C2017	F1H1H103A219	0.01uF 50V	[M]
C2018	ECEA1CKS470B	47uF 16V	[M]
C2019	ECEA1CKS470B	47uF 16V	[M]
C2020	F1H1H103A219	0.01uF 50V	[M]
C2025	ECJ1VB1H221K	220pF 50V	[M]
C2026	F1H1H104A013	0.1uF 50V	[M]
C2027	F1H1H104A013	0.1uF 50V	[M]
C2028	F2A1C100A207	10uF 16V	[M]
C2029	F2A1C100A207	10uF 16V	[M]
C2101	F1H1C105A097	1uF 16V	[M]
C2102	F1H1C473A088	0.047uF 16V	[M]
C2103	F1H1C105A097	1uF 16V	[M]
C2104	F1H1C473A088	0.047uF 16V	[M]
C2105	ECEA1EKS4R7B	4.7uF 25V	[M]
C2106	F1H1H222A219	2200pF 50V	[M]
C2108	F1H1H682A219	6800pF 50V	[M]
C2111	F1H1C105A097	1uF 16V	[M]
C2112	F1H1H182A219	1800pF 50V	[M]
C2113	F1H1H102A219	1000pF 50V	[M]
C2114	F1H1H562A219	5600pF 50V	[M]
C2115	F1H1C563A055	0.056uF 16V	[M]
C2116	F1H1C563A055	0.056uF 16V	[M]
C2117	F1H1H104A013	0.1uF 50V	[M]
C2118	F1H1H104A013	0.1uF 50V	[M]
C2119	F1H1C105A097	1uF 16V	[M]
C2121	ECJ1VB1C823K	0.082uF 16V	[M]
C2123	F1H1C105A097	1uF 16V	[M]
C2124	F1H1H102A219	1000pF 50V	[M]
C2125	F1H1H101A230	100pF 50V	[M]
C2126	F1H1C105A097	1uF 16V	[M]
C2127	F1H1H104A013	0.1uF 50V	[M]
C2128	F1H1H470A004	47pF 50V	[M]
C2129	F1H1H104A013	0.1uF 50V	[M]
C2130	F1H1C683A087	0.068uF 16V	[M]
C2131	F1H1H682A219	6800pF 50V	[M]
C2135	F1H1H153A219	0.015uF 50V	[M]
C2162	F1H1H332A013	3300pF 50V	[M]
C2164	ECJ1VB1H221K	220pF 50V	[M]
C2169	F1H1H103A219	0.01uF 50V	[M]
C2171	ECEA1EKS4R7B	4.7uF 25V	[M]
C2177	ECEA1HKA010B	1pF 50V	[M]
C2177	F2A1H1R0A213	1.0uF 50V	[M]
C2178	F1H1H101A230	100pF 50V	[M]
C2179	ECJ1VC1H151K	150pF 50V	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
C2180	F1H1H104A013	0.1uF 50V	[M]
C2181	F1H1H102A219	1000pF 50V	[M]
C2190	F1H1C105A097	1uF 16V	[M]
C2193	ECJ1VB1H123K	0.012uF 50V	[M]
C2194	F1J0J4750004	4.7uF 6.3V	[M]
C2195	ECJ1VB1H681K	680pF 50V	[M]
C2201	F1H1C105A097	1uF 16V	[M]
C2202	F1H1C473A088	0.047uF 16V	[M]
C2203	F1H1C105A097	1uF 16V	[M]
C2204	F1H1C473A088	0.047uF 16V	[M]
C2206	F1H1H222A219	2200pF 50V	[M]
C2208	F1H1H682A219	6800pF 50V	[M]
C2211	F1H1C105A097	1uF 16V	[M]
C2212	F1H1H182A219	1800pF 50V	[M]
C2213	F1H1H102A219	1000pF 50V	[M]
C2214	F1H1H562A219	5600pF 50V	[M]
C2215	F1H1C563A055	0.056uF 16V	[M]
C2216	F1H1C563A055	0.056uF 16V	[M]
C2217	F1H1H104A013	0.1uF 50V	[M]
C2218	F1H1H104A013	0.1uF 50V	[M]
C2219	F1H1C105A097	1uF 16V	[M]
C2221	ECJ1VB1C823K	0.082uF 16V	[M]
C2223	F1H1C105A097	1uF 16V	[M]
C2224	F1H1H102A219	1000pF 50V	[M]
C2225	F1H1H101A230	100pF 50V	[M]
C2226	F1H1C105A097	1uF 16V	[M]
C2227	F1H1H104A013	0.1uF 50V	[M]
C2228	F1H1H470A004	47pF 50V	[M]
C2229	F1H1H104A013	0.1uF 50V	[M]
C2230	F1H1C683A087	0.068uF 16V	[M]
C2231	F1H1H682A219	6800pF 50V	[M]
C2235	F1H1H153A219	0.015uF 50V	[M]
C2262	F1H1H332A013	3300pF 50V	[M]
C2264	ECJ1VB1H221K	220pF 50V	[M]
C2277	ECEA1HKA010B	1pF 50V	[M]
C2277	F2A1H1R0A213	1.0uF 50V	[M]
C2278	F1H1H101A230	100pF 50V	[M]
C2279	ECJ1VC1H151K	150pF 50V	[M]
C2280	F1H1H104A013	0.1uF 50V	[M]
C2281	F1H1H102A219	1000pF 50V	[M]
C2290	F1H1C105A097	1uF 16V	[M]
C2293	ECJ1VB1H123K	0.012uF 50V	[M]
C2294	F1J0J4750004	4.7uF 6.3V	[M]
C2295	ECJ1VB1H681K	680pF 50V	[M]
C2300	F1H1C105A097	1uF 16V	[M]
C2301	F1J0J4750004	4.7uF 6.3V	[M]
C2302	F1H1H473A783	0.047uF 50V	[M]
C2303	F1H1C683A087	0.068uF 16V	[M]
C2304	F1J0J4750004	4.7uF 6.3V	[M]
C2305	F1H1H332A013	3300pF 50V	[M]
C2306	F1H1A154A037	0.15uF 10V	[M]
C2307	F1H1C105A097	1uF 16V	[M]
C2308	F1H1H223A219	0.022uF 50V	[M]
C2309	ECJ1VB1C823K	0.082uF 16V	[M]
C2310	F1H1H223A219	0.022uF 50V	[M]
C2313	F1H1H223A219	0.022uF 50V	[M]
C2315	F1H1H153A219	0.015uF 50V	[M]
C2400	F1H1C105A097	1uF 16V	[M]
C2401	F1J0J4750004	4.7uF 6.3V	[M]
C2402	F1H1H473A783	0.047uF 50V	[M]
C2403	F1H1C683A087	0.068uF 16V	[M]
C2404	F1J0J4750004	4.7uF 6.3V	[M]
C2405	F1H1H332A013	3300pF 50V	[M]
C2406	F1H1A154A037	0.15uF 10V	[M]
C2407	F1H1C105A097	1uF 16V	[M]
C2408	F1H1H223A219	0.022uF 50V	[M]
C2413	F1H1H103A219	0.01uF 50V	[M]
C2415	F1H1H153A219	0.015uF 50V	[M]
C2500	F1H1C105A097	1uF 16V	[M]
C2501	ECEA1EKS4R7B	4.7uF 25V	[M]
C2502	F1H1H473A783	0.047uF 50V	[M]
C2503	F1H1C473A088	0.047uF 16V	[M]
C2504	ECJ1VB1H681K	680pF 50V	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
C2509	F1H1H103A219	0.01uF 50V	[M]
C2551	F1H1H560A230	56pF 50V	[M]
C2552	F1H1H152A219	1500pF 50V	[M]
C2553	F1H1H152A219	1500pF 50V	[M]
C2554	F1H1H104A013	0.1uF 50V	[M]
C2555	F1H1H104A013	0.1uF 50V	[M]
C2556	ECEA1HKS2R2B	2.2uF 50V	[M]
C2600	F1H1C105A097	1uF 16V	[M]
C2601	ECEA1EKS220B	22uF 25V	[M]
C2602	ECEA1EKS4R7B	4.7uF 25V	[M]
C2603	F1H1H223A219	0.022uF 50V	[M]
C2604	ECEA1EKS4R7B	4.7uF 25V	[M]
C2605	F1H1H682A219	6800pF 50V	[M]
C2609	F1H1A224A007	0.22uF 10V	[M]
C2610	ECJ1VB1A334K	0.33uF 10V	[M]
C2611	F1H1H104A013	0.1uF 50V	[M]
C2612	F1H1H103A219	0.01uF 50V	[M]
C2617	F1H1C683A087	0.068uF 16V	[M]
C2751	F1H1C105A097	1uF 16V	[M]
C2756	F2A0J470A167	47uF 6.3V	[M]
C2801	F1H1C105A097	1uF 16V	[M]
C2802	F2A0J102A016	1000uF 6.3V	[M]
C2804	ECA1AM331B	330uF 10V	[M]
C2805	F2A0J471A016	470uF 6.3V	[M]
C2806	F2A0J471A016	470uF 6.3V	[M]
C2807	F1H1H103A219	0.01uF 50V	[M]
C2808	F2A1A2210063	220uF 10V	[M]
C2809	ECEA1EKS220B	22uF 25V	[M]
C2810	F1H1H103A219	0.01uF 50V	[M]
C2811	F1H1H104A013	0.1uF 50V	[M]
C2812	F1H1H104A013	0.1uF 50V	[M]
C2817	F1H1C105A097	1uF 16V	[M]
C2818	F1H1C105A097	1uF 16V	[M]
C2823	F1H1H101A230	100pF 50V	[M]
C2825	F1H1H101A230	100pF 50V	[M]
C2826	F1H1H101A230	100pF 50V	[M]
C2827	F1H1H101A230	100pF 50V	[M]
C2842	F2A0J102A016	1000uF 6.3V	[M]
C2847	ECQB1H103JF3	0.01uF 50V	[M]
C2847	ECQB1H103JF3	0.01uF 50V	[M]
C2900	F2A1V330A379	33uF 35V	[M]
C2901	F2A1E102A151	1000uF 25V	[M]
C2902	ECQB1H392KF3	3900pF 50V	[M]
C2903	F2A1V330A379	33uF 35V	[M]
C2905	F1H1H103A219	0.01uF 50V	[M]
C2906	EEUFC1C471B	470uF 16V	[M]
C2907	F1H1H103A219	0.01uF 50V	[M]
C2908	F2A1C101A208	100uF 16V	[M]
C2909	F2A1A330A010	33uF 10V	[M]
C2911	F2A0J102A551	1000uF 6.3V	[M]
C2912	ECEA1CKS101B	100pF 16V	[M]
C2912	F2A1C101A155	100uF 16V	[M]
C2914	F2A0J221A245	220uF 6.3V	[M]
C2915	F1H1H104A013	0.1uF 50V	[M]
C2916	F2A1C101A208	100uF 16V	[M]
C2917	F2A0J101A181	100uF 6.3V	[M]
C2919	ECA1CM221B	220uF 16V	[M]
C2919	F2A1C221A019	220uF 16V	[M]
C2922	EEUFC0J821B	820uF 6.3V	[M]
C2923	F2A1E2210045	220uF 25V	[M]
C2924	F1H1H102A219	1000pF 50V	[M]
C2925	EEUFC1C101B	100uF 16V	[M]
C2927	F1H1H103A219	0.01uF 50V	[M]
C2929	F1H1H103A219	0.01uF 50V	[M]
C2930	EEUFM1A681B	680uF 10V	[M]
C2939	F1H1H103A219	0.01uF 50V	[M]
C2941	ECA1CM221B	220uF 16V	[M]
C2941	F2A1C221A019	220uF 16V	[M]
C2947	EEUFM1A681B	680uF 10V	[M]
C2948	F1H1H104A013	0.1uF 50V	[M]
C2949	F1H1H104A013	0.1uF 50V	[M]
C2951	F2A1C101A208	100uF 16V	[M]
C2952	F1H1C105A097	1uF 16V	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
C2955	F2A1E2210045	220uF 25V	[M]
C2972	D0GBR00JA008	0 1/16W	[M]
C2975	F1H1H104A013	0.1uF 50V	[M]
C3901	EEE0GA331WP	330uF 4V	[M]
C3902	EEE0GA331WP	330uF 4V	[M]
C3904	EEE0GA331WP	330uF 4V	[M]
C3906	EEE0GA331WP	330uF 4V	[M]
C3907	F1G1A1040006	0.1uF 10V	[M]
C3908	F1G1A1040006	0.1uF 10V	[M]
C3909	F1H0J1050013	1uF 6.3V	[M]
C3910	F1G1A1040006	0.1uF 10V	[M]
C3911	F1H0J1050013	1uF 6.3V	[M]
C3913	F1G1A1040006	0.1uF 10V	[M]
C3914	F1G1A1040006	0.1uF 10V	[M]
C3915	F1H0J1050013	1uF 6.3V	[M]
C3916	F1G1A1040006	0.1uF 10V	[M]
C3917	F1H0J1050013	1uF 6.3V	[M]
C3918	F1G1A1040006	0.1uF 10V	[M]
C3919	F1H0J1050013	1uF 6.3V	[M]
C3920	F1H0J1050013	1uF 6.3V	[M]
C3921	F1G1A1040006	0.1uF 10V	[M]
C3922	F1G1A1040006	0.1uF 10V	[M]
C3923	F1H0J1050013	1uF 6.3V	[M]
C3924	F1H0J1050013	1uF 6.3V	[M]
C3925	F1G1A1040006	0.1uF 10V	[M]
C3926	F1G1A1040006	0.1uF 10V	[M]
C3927	F1H0J1050013	1uF 6.3V	[M]
C3928	F1G1A1040006	0.1uF 10V	[M]
C3929	F1G1A1040006	0.1uF 10V	[M]
C3930	F1H0J1050013	1uF 6.3V	[M]
C3932	F1H0J1050013	1uF 6.3V	[M]
C3940	F1G1A1040006	0.1uF 10V	[M]
C3941	F1G1H221A444	220pF 50V	[M]
C3954	F1G1C104A083	0.1uF 16V	[M]
C3955	F1G1C1030007	0.01uF 16V	[M]
C3956	F1H0J1050013	1uF 6.3V	[M]
C3964	F1G1A1040006	0.1uF 10V	[M]
C5000	F1H1H102A219	1000pF 50V	[M]
C5001	F1H1H102A219	1000pF 50V	[M]
C5002	F1H1A474A001	0.47uF 10V	[M]
C5003	F1H1A474A001	0.47uF 10V	[M]
C5004	F1H1A474A001	0.47uF 10V	[M]
C5005	F1H1A474A001	0.47uF 10V	[M]
C5006	F1H1H331A013	330pF 50V	[M]
C5007	F1H1H331A013	330pF 50V	[M]
C5008	F1H1H153A219	0.015uF 50V	[M]
C5009	F1H1H153A219	0.015uF 50V	[M]
C5010	F1H2A221A009	220pF 100V	[M]
C5011	F1H2A221A009	220pF 100V	[M]
C5012	F1H2A221A009	220pF 100V	[M]
C5013	F1H2A221A009	220pF 100V	[M]
C5014	F0C1H684A013	0.68uF 50V	[M]
C5015	F0C1H684A013	0.68uF 50V	[M]
C5016	F1H1H104A013	0.1uF 50V	[M]
C5017	F1H1H104A013	0.1uF 50V	[M]
C5018	F1K2A1040007	0.1uF 100V	[M]
C5019	F1H1H104A013	0.1uF 50V	[M]
C5020	F1H1H104A013	0.1uF 50V	[M]
C5021	F1H1H104A013	0.1uF 50V	[M]
C5022	F1H1H104A013	0.1uF 50V	[M]
C5023	F1K2A1040007	0.1uF 100V	[M]
C5024	F1H1H104A013	0.1uF 50V	[M]
C5025	F1H1H104A013	0.1uF 50V	[M]
C5027	F1H1H104A013	0.1uF 50V	[M]
C5028	F1H1H104A013	0.1uF 50V	[M]
C5030	F1H1H221A792	220pF 50V	[M]
C5031	F1H1C224A068	0.22uF 16V	[M]
C5032	F1H1H102A219	1000pF 50V	[M]
C5033	F1H1H104A013	0.1uF 50V	[M]
C5040	F2A2A2200035	22uF 100V	[M]
C5050	F1H1H104A013	0.1uF 50V	[M]
C5051	F1H1H104A013	0.1uF 50V	[M]
C5052	F1H1H104A013	0.1uF 50V	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
C5053	F1H1H104A013	0.1uF 50V	[M]
C5106	F1H1A474A001	0.47uF 10V	[M]
C5107	F1H1A474A001	0.47uF 10V	[M]
C5117	F1H1H102A219	1000pF 50V	[M]
C5119	F1H1H102A219	1000pF 50V	[M]
C5120	F1H1A474A001	0.47uF 10V	[M]
C5121	F1H1A474A001	0.47uF 10V	[M]
C5133	F2A0J101A245	100uF 6.3V	[M]
C5150	F1H1H332A013	3300pF 50V	[M]
C5151	F1H1H332A013	3300pF 50V	[M]
C5152	F1H1H102A219	1000pF 50V	[M]
C5153	F1H1H102A219	1000pF 50V	[M]
C5154	F1H1H102A219	1000pF 50V	[M]
C5155	F1H1H102A219	1000pF 50V	[M]
C5200	F1H1H104A013	0.1uF 50V	[M]
C5201	F1H1H153A219	0.015uF 50V	[M]
C5202	F1H1C224A068	0.22uF 16V	[M]
C5203	F1H2A221A009	220pF 100V	[M]
C5204	F1H1H153A219	0.015uF 50V	[M]
C5205	F1H2A221A009	220pF 100V	[M]
C5206	F1H1H104A013	0.1uF 50V	[M]
C5207	F1K2A1040007	0.1uF 100V	[M]
C5208	F1H1H104A013	0.1uF 50V	[M]
C5209	F1H1H104A013	0.1uF 50V	[M]
C5211	F1H2A221A009	220pF 100V	[M]
C5212	F1H1H221A792	220pF 50V	[M]
C5213	F1H1H104A013	0.1uF 50V	[M]
C5214	F1H1H104A013	0.1uF 50V	[M]
C5216	F1H1H331A013	330pF 50V	[M]
C5217	F1H1H104A013	0.1uF 50V	[M]
C5218	F1H2A221A009	220pF 100V	[M]
C5219	F1K2A1040007	0.1uF 100V	[M]
C5221	F1H1H102A219	1000pF 50V	[M]
C5222	F1H1A474A001	0.47uF 10V	[M]
C5223	F1H1A474A001	0.47uF 10V	[M]
C5224	F1H1H331A013	330pF 50V	[M]
C5225	F0C1H684A013	0.68uF 50V	[M]
C5226	F1H1H104A013	0.1uF 50V	[M]
C5227	F1H1H104A013	0.1uF 50V	[M]
C5228	F0C1H684A013	0.68uF 50V	[M]
C5231	F1H1H102A219	1000pF 50V	[M]
C5232	F1H1A474A001	0.47uF 10V	[M]
C5233	F1H1A474A001	0.47uF 10V	[M]
C5234	F1H1H102A219	1000pF 50V	[M]
C5240	F2A2A2200035	22uF 100V	[M]
C5250	F1H1H104A013	0.1uF 50V	[M]
C5251	F1H1H104A013	0.1uF 50V	[M]
C5300	F0C1H684A013	0.68uF 50V	[M]
C5301	F1H1H104A013	0.1uF 50V	[M]
C5302	F1H1H104A013	0.1uF 50V	[M]
C5303	F1H1H104A013	0.1uF 50V	[M]
C5304	F1H1H331A013	330pF 50V	[M]
C5306	F1H1H104A013	0.1uF 50V	[M]
C5307	F1H2A221A009	220pF 100V	[M]
C5309	F1H1H104A013	0.1uF 50V	[M]
C5310	F1K2A1040007	0.1uF 100V	[M]
C5311	F1H2A221A009	220pF 100V	[M]
C5312	F1H1H331A013	330pF 50V	[M]
C5313	F1H1H104A013	0.1uF 50V	[M]
C5314	F1H1A474A001	0.47uF 10V	[M]
C5315	F1H1H102A219	1000pF 50V	[M]
C5316	F1H1H104A013	0.1uF 50V	[M]
C5317	F1H1A474A001	0.47uF 10V	[M]
C5318	F1H1H104A013	0.1uF 50V	[M]
C5319	F1K2A1040007	0.1uF 100V	[M]
C5321	F1H1C224A068	0.22uF 16V	[M]
C5322	F1H1H153A219	0.015uF 50V	[M]
C5323	F1H1H221A792	220pF 50V	[M]
C5324	F1H1H153A219	0.015uF 50V	[M]
C5325	F1H2A221A009	220pF 100V	[M]
C5326	F1H2A221A009	220pF 100V	[M]
C5327	F1H1H104A013	0.1uF 50V	[M]
C5328	F0C1H684A013	0.68uF 50V	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
C5331	F1H1H102A219	1000pF 50V	[M]
C5332	F1H1A474A001	0.47uF 10V	[M]
C5333	F1H1H102A219	1000pF 50V	[M]
C5334	F1H1A474A001	0.47uF 10V	[M]
C5350	F1H1H104A013	0.1uF 50V	[M]
C5351	F1H1H104A013	0.1uF 50V	[M]
C5400	F0C1H684A013	0.68uF 50V	[M]
C5401	F1H1H104A013	0.1uF 50V	[M]
C5402	F1H1H104A013	0.1uF 50V	[M]
C5403	F1H1H104A013	0.1uF 50V	[M]
C5404	F1H1H331A013	330pF 50V	[M]
C5405	F1H1H104A013	0.1uF 50V	[M]
C5406	F1H1H104A013	0.1uF 50V	[M]
C5407	F1H2A221A009	220pF 100V	[M]
C5409	F1H1H104A013	0.1uF 50V	[M]
C5410	F1K2A1040007	0.1uF 100V	[M]
C5411	F1H2A221A009	220pF 100V	[M]
C5412	F1H1H331A013	330pF 50V	[M]
C5413	F1H1H104A013	0.1uF 50V	[M]
C5416	F1H1H104A013	0.1uF 50V	[M]
C5418	F1H1H104A013	0.1uF 50V	[M]
C5419	F1K2A1040007	0.1uF 100V	[M]
C5421	F1H1C224A068	0.22uF 16V	[M]
C5422	F1H1H153A219	0.015uF 50V	[M]
C5423	F1H1H221A792	220pF 50V	[M]
C5424	F1H1H153A219	0.015uF 50V	[M]
C5425	F1H2A221A009	220pF 100V	[M]
C5426	F1H2A221A009	220pF 100V	[M]
C5427	F1H1H104A013	0.1uF 50V	[M]
C5428	F0C1H684A013	0.68uF 50V	[M]
C5431	F1H1H102A219	1000pF 50V	[M]
C5440	F2A2A2200035	22uF 100V	[M]
C5445	F1H1H104A013	0.1uF 50V	[M]
C5451	F1H1H104A013	0.1uF 50V	[M]
C5452	F1H1H104A013	0.1uF 50V	[M]
C5453	F1H1H104A013	0.1uF 50V	[M]
C5454	F1H1H104A013	0.1uF 50V	[M]
C5508	F2A1V4710074	470uF 35V	[M]
C5509	F2A1V4710074	470uF 35V	[M]
C5510	F2A1V4710074	470uF 35V	[M]
C5511	F2A1V4710074	470uF 35V	[M]
C5512	F2A1V4710074	470uF 35V	[M]
C5513	F2A1V4710074	470uF 35V	[M]
C5514	F1H1H104A013	0.1uF 50V	[M]
C5515	F1H1H104A013	0.1uF 50V	[M]
C5516	F2A1V4710074	470uF 35V	[M]
C5517	F2A1V4710074	470uF 35V	[M]
C5518	F1H1H104A013	0.1uF 50V	[M]
C5519	F1H1H104A013	0.1uF 50V	[M]
C5520	F1H1H104A013	0.1uF 50V	[M]
C5521	F1H1H104A013	0.1uF 50V	[M]
C5522	F1H1H104A013	0.1uF 50V	[M]
C5523	F1H1H104A013	0.1uF 50V	[M]
C5524	F1H1H104A013	0.1uF 50V	[M]
C5525	F1H1H104A013	0.1uF 50V	[M]
C5540	F2A2A2200035	22uF 100V	[M]
C5550	F1H1H103A219	0.01uF 50V	[M]
C5551	ECJ1VB1H391K	390pF 50V	[M]
C5552	ECJ1VB1H391K	390pF 50V	[M]
C5553	F1H1H101A230	100pF 50V	[M]
C5554	F1H1H104A013	0.1uF 50V	[M]
C5555	F1K1C1060001	10uF 16V	[M]
C5556	F1H1H103A219	0.01uF 50V	[M]
C5557	F1H1H101A230	100pF 50V	[M]
C5558	F1H1H470A004	47pF 50V	[M]
C5559	F1H1H470A004	47pF 50V	[M]
C5560	F1H1H104A013	0.1uF 50V	[M]
C5561	F1H1H101A230	100pF 50V	[M]
C5562	F2A0J102A016	1000uF 6.3V	[M]
C5601	F2A1C100A234	10uF 16V	[M]
C5602	F2A1C100A234	10uF 16V	[M]
C5690	F1H1H102A219	1000pF 50V	[M]
C5691	F2A1E100A202	10uF 25V	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
C5692	F2A0J221A245	220uF 6.3V	[M]
C5693	F1H1H104A013	0.1uF 50V	[M]
C5694	F2A1C330A234	33uF 16V	[M]
C5695	F1H1H104A013	0.1uF 50V	[M]
C5696	ECEA1EKS220B	22uF 25V	[M]
C5697	ECA1HAK010XB	1uF 50V	[M]
C5700	F1BAF1020020	1000pF	[M] ⚠
C5701	F0CAF334A087	0.33uF	[M] ⚠
C5703	F0CAF224A085	0.22uF	[M] ⚠
C5704	F1BAF1020020	1000pF	[M] ⚠
C5705	F1BAF1020020	1000pF	[M] ⚠
C5712	F2B2D5610021	560uF 200V	[M]
C5713	F0C2J1030005	0.01uF 630V	[M]
C5720	F1H1H104A013	0.1uF 50V	[M]
C5721	ECJ1VB1H221K	220pF 50V	[M]
C5722	F1H1H102A219	1000pF 50V	[M]
C5723	F1H1H471A219	470pF 50V	[M]
C5724	F2A1H5600009	56uF 50V	[M]
C5725	F1H1H104A013	0.1uF 50V	[M]
C5726	F1H1H104A013	0.1uF 50V	[M]
C5727	ECQP6332JUB	3300uF 630V	[M]
C5728	F1H1H102A219	1000pF 50V	[M]
C5730	ECEA1HKS010B	1uF 50V	[M]
C5790	F1K2J2220002	2200pF 630V	[M]
C5791	F2A1H2R2A213	2.2uF 50V	[M]
C5794	F1H1H220A004	22pF 50V	[M]
C5795	ECJ2VC1H222J	2200pF 50V	[M]
C5796	F1J1H104A717	0.1uF 50V	[M]
C5797	F1A3A470A023	47pF 1000V	[M]
C5798	F2A1H5600009	56uF 50V	[M]
C5800	F1J2E1030004	0.01uF 250V	[M]
C5805	F2B1V222A007	2200uF 35V	[M]
C5808	F2B1V222A007	2200uF 35V	[M]
C5810	F1H1H104A013	0.1uF 50V	[M]
C5812	F1H1H104A013	0.1uF 50V	[M]
C5813	F2A1V4710036	470uF 35V	[M]
C5815	F1H1H104A013	0.1uF 50V	[M]
C5816	F2A1E471A652	470uF 25V	[M]
C5817	F2A2AR22A358	0.22uF 100V	[M]
C5818	F1H1H104A013	0.1uF 50V	[M]
C5819	F1J2E1030004	0.01uF 250V	[M]
C5820	F1J2E1030004	0.01uF 250V	[M]
C5821	F1J2E1030004	0.01uF 250V	[M]
C5822	F1J2E1030004	0.01uF 250V	[M]
C5823	F1H1H104A013	0.1uF 50V	[M]
C5824	F2A1E471A652	470uF 25V	[M]
C5825	F1H1H104A013	0.1uF 50V	[M]
C5826	F1J2E1030004	0.01uF 250V	[M]
C5831	F1H1H104A013	0.1uF 50V	[M]
C5832	F1H1H104A013	0.1uF 50V	[M]
C5869	F1H1H104A013	0.1uF 50V	[M]
C5896	F1H1H104A013	0.1uF 50V	[M]
C5897	F1H1H104A013	0.1uF 50V	[M]
C5898	F1H1H104A013	0.1uF 50V	[M]
C5899	F2A1C221A104	220uF 16V	[M]
C6100	F1J0J106A020	10uF 6.3V	[M]
C6101	F1J0J106A020	10uF 6.3V	[M]
C6102	F1H1H470A004	47pF 50V	[M]
C6103	ECJ1VB1H681K	680pF 50V	[M]
C6104	F1H0J1050013	1uF 6.3V	[M]
C6200	F1J0J106A020	10uF 6.3V	[M]
C6201	F1J0J106A020	10uF 6.3V	[M]
C6202	F1H1H470A004	47pF 50V	[M]
C6203	ECJ1VB1H681K	680pF 50V	[M]
C6204	F1H0J1050013	1uF 6.3V	[M]
C6300	F2A1A470A159	47uF 10V	[M]
C6301	ECEA1EKS4R7B	4.7uF 25V	[M]
C6302	ECEA1EKS4R7B	4.7uF 25V	[M]
C6303	F1H1H104A013	0.1uF 50V	[M]
C6304	ECEA1HKA100B	10pF 50V	[M]
C6304	F2A1H100A214	10uF 50V	[M]
C6400	ECEA1CKA470B	47pF 16V	[M]
C6400	F2A1C470A016	47uF 16V	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
C6402	F1J0J106A014	10uF 6.3V	[M]
C6403	F1H1H104A013	0.1uF 50V	[M]
C6404	F2A0J470A167	47uF 6.3V	[M]
C6405	F2A1A330A010	33uF 10V	[M]
C6406	F1H1H104A013	0.1uF 50V	[M]
C6407	F1H1H104A013	0.1uF 50V	[M]
C6408	F1H1H104A013	0.1uF 50V	[M]
C6601	F2A1A330A010	33uF 10V	[M]
C6901	F1H1H104A013	0.1uF 50V	[M]
C6902	F1H1H101A720	100pF 50V	[M]
C6903	F2A1H100A214	10uF 50V	[M]
C6905	F2A1H100A214	10uF 50V	[M]
C6906	F1H1H101A720	100pF 50V	[M]
C6907	F1H1H101A720	100pF 50V	[M]
C6909	F1H1H103A219	0.01uF 50V	[M]
C6910	ECEA0JKS101B	100uF 6.3V	[M]
C6911	F1H1H103A219	0.01uF 50V	[M]
C6913	ECEA1HKS3R3B	3.3uF 50V	[M]
C6916	F1H1H101A720	100pF 50V	[M]
C6917	F1H1H101A720	100pF 50V	[M]
C6918	F1K1C106A062	10uF 16V	[M]
C6919	F1H1H101A720	100pF 50V	[M]
C6925	F1H1H103A219	0.01uF 50V	[M]
C6931	F1H1H103A219	0.01uF 50V	[M]
C6941	F1H1H473A783	0.047uF 50V	[M]
C6951	F1H1H473A783	0.047uF 50V	[M]
C8001	EEE0GA331WP	330uF 4V	[M]
C8002	F2G0J330A031	33uF 6.3V	[M]
C8003	F1G1C104A083	0.1uF 16V	[M]
C8004	F1G1C104A083	0.1uF 16V	[M]
C8005	F1G1C104A083	0.1uF 16V	[M]
C8006	F1G1C104A083	0.1uF 16V	[M]
C8007	F1G1C104A083	0.1uF 16V	[M]
C8010	F1G1H221A444	220pF 50V	[M]
C8011	F2G0J101A031	100uF 6.3V	[M]
C8012	F1G1C104A083	0.1uF 16V	[M]
C8013	F1G1C104A083	0.1uF 16V	[M]
C8014	F1G1C104A083	0.1uF 16V	[M]
C8015	F1G1C104A083	0.1uF 16V	[M]
C8016	F1G1C104A083	0.1uF 16V	[M]
C8018	F1G1C104A083	0.1uF 16V	[M]
C8020	F1G1C104A083	0.1uF 16V	[M]
C8021	F1G1C104A083	0.1uF 16V	[M]
C8022	F1G1C104A083	0.1uF 16V	[M]
C8023	F1G1C104A083	0.1uF 16V	[M]
C8026	F1G1C104A083	0.1uF 16V	[M]
C8051	F1H0J1050013	1uF 6.3V	[M]
C8052	F1G1A1040006	0.1uF 10V	[M]
C8053	F1G1C104A083	0.1uF 16V	[M]
C8054	F1G1H221A444	220pF 50V	[M]
C8055	F1H0J1050013	1uF 6.3V	[M]
C8056	F1G1E2220001	2200pF 25V	[M]
C8057	F1H0J1050013	1uF 6.3V	[M]
C8111	F1G1A1040006	0.1uF 10V	[M]
C8112	F1H0J1050013	1uF 6.3V	[M]
C8113	F1G1E4710001	470pF 25V	[M]
C8151	F1H0J4750005	4.7uF	[M]
C8152	F1H1C105A097	1uF 16V	[M]
C8201	F2G0J101A031	100uF 6.3V	[M]
C8202	F1G1A1040006	0.1uF 10V	[M]
C8203	F1G1A1040006	0.1uF 10V	[M]
C8211	F1G1E1220001	1200pF 25V	[M]
C8221	F1G1E1020001	1000pF 25V	[M]
C8222	F1G1E8210002	820pF 25V	[M]
C8225	F1G1E1020001	1000pF 25V	[M]
C8226	F1G1E1020001	1000pF 25V	[M]
C8231	F1G1A1040006	0.1uF 10V	[M]
C8232	F1G1A1040006	0.1uF 10V	[M]
C8251	F2G0J221A031	220uF 6.3V	[M]
C8252	F1G1C104A083	0.1uF 16V	[M]
C8253	F1G1C104A083	0.1uF 16V	[M]
C8255	F2G1C220A037	22uF 16V	[M]
C8256	F1G1C104A083	0.1uF 16V	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
C8257	F2G1C470A076	47uF 16V	[M]
C8258	F1G1C104A083	0.1uF 16V	[M]
C8261	F1G1C104A083	0.1uF 16V	[M]
C8262	F1G1C104A083	0.1uF 16V	[M]
C8301	F2G0J221A031	220uF 6.3V	[M]
C8302	F2G0J330A031	33uF 6.3V	[M]
C8303	F1G1A1040006	0.1uF 10V	[M]
C8304	F1G1A1040006	0.1uF 10V	[M]
C8305	F1G1A1040006	0.1uF 10V	[M]
C8306	F1G1A1040006	0.1uF 10V	[M]
C8311	F1G1A1040006	0.1uF 10V	[M]
C8312	F1H0J1050013	1uF 6.3V	[M]
C8313	F1H0J1050013	1uF 6.3V	[M]
C8320	F1G1C104A083	0.1uF 16V	[M]
C8321	F1G1A1040006	0.1uF 10V	[M]
C8325	F1G1A1040006	0.1uF 10V	[M]
C8330	F2G0J470A031	47uF 6.3V	[M]
C8331	F1G1A1040006	0.1uF 10V	[M]
C8335	F1G1A1040006	0.1uF 10V	[M]
C8340	F1G1C104A083	0.1uF 16V	[M]
C8341	F1G1A1040006	0.1uF 10V	[M]
C8401	F1G1H150A565	15pF 50V	[M]
C8421	F2G0J221A031	220uF 6.3V	[M]
C8422	F1G1C104A083	0.1uF 16V	[M]
C8423	F2G0J330A031	33uF 6.3V	[M]
C8424	F1G1C104A083	0.1uF 16V	[M]
C8425	F1G1H150A565	15pF 50V	[M]
C8426	F1G1C104A083	0.1uF 16V	[M]
C8428	F1G1C104A083	0.1uF 16V	[M]
C8429	F1G1C104A083	0.1uF 16V	[M]
C8431	F2G1C100A072	10uF 16V	[M]
C8432	F2G1C100A072	10uF 16V	[M]
C8433	F2G1C100A072	10uF 16V	[M]
C8501	F2G0J101A031	100uF 6.3V	[M]
C8502	F1G1C104A083	0.1uF 16V	[M]
C8503	F1G1C104A083	0.1uF 16V	[M]
C8504	F1G1C104A083	0.1uF 16V	[M]
C8505	F1G1C104A083	0.1uF 16V	[M]
C8506	F1G1C104A083	0.1uF 16V	[M]
C8511	F1H0J1050013	1uF 6.3V	[M]
C8512	F1H0J1050013	1uF 6.3V	[M]
C8513	F1G1A1040006	0.1uF 10V	[M]
C8514	F1G1A1040006	0.1uF 10V	[M]
C8515	F1G1A1040006	0.1uF 10V	[M]
C8516	F1G1A1040006	0.1uF 10V	[M]
C8521	F1G1A1040006	0.1uF 10V	[M]
C8522	F1G1A1040006	0.1uF 10V	[M]
C8523	F1G1C104A083	0.1uF 16V	[M]
C8524	F1G1C104A083	0.1uF 16V	[M]
C8525	F1G1C562A039	5600pF 16V	[M]
C8526	F1G1C183A039	0.018uF 16V	[M]
C8527	F1G1A333A013	0.033uF 10V	[M]
C8528	F1H0J1050013	1uF 6.3V	[M]
C8529	F1H0J1050013	1uF 6.3V	[M]
C8530	F1G1C104A083	0.1uF 16V	[M]
C8531	F1G1H101A566	100pF 50V	[M]
C8532	F1G1H221A444	220pF 50V	[M]
C8533	F1G1C104A083	0.1uF 16V	[M]
C8541	F1G1E4720002	4700pF 25V	[M]
C8550	F2G0J330A031	33uF 6.3V	[M]
C8551	F1G1C104A083	0.1uF 16V	[M]
C8552	F2G1C100A072	10uF 16V	[M]
C8553	F2G0J470A031	47uF 6.3V	[M]
C8554	F1H0J1050013	1uF 6.3V	[M]
C8561	F1G1C104A083	0.1uF 16V	[M]
C8562	F2G1C100A072	10uF 16V	[M]
C8563	F2G0J470A031	47uF 6.3V	[M]
C8564	F1H0J1050013	1uF 6.3V	[M]
C8571	F1J1A106A043	10uF 10V	[M]
C8572	F1G1C104A083	0.1uF 16V	[M]
C8601	F1G1C104A083	0.1uF 16V	[M]
C8602	F1G1C153A039	0.015uF 16V	[M]
C8606	F1G1C104A083	0.1uF 16V	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
C8611	F1G1C104A083	0.1uF 16V	[M]
C8621	F1G1H100A565	10pF 50V	[M]
C8622	F1G1H100A565	10pF 50V	[M]
C8651	F1G1C104A083	0.1uF 16V	[M]
C8652	F1G1C104A083	0.1uF 16V	[M]
C8691	F1G1C104A083	0.1uF 16V	[M]
C8695	F1G1C104A083	0.1uF 16V	[M]
C8701	F1G1A1040006	0.1uF 10V	[M]
C8901	F1G1C104A083	0.1uF 16V	[M]
C9002	F1G1C104A083	0.1uF 16V	[M]
C9003	F1G1C104A083	0.1uF 16V	[M]
FL8101	F1H0J1050018	1uF 6.3V	[M]
FL8102	F1H0J1050018	1uF 6.3V	[M]
FL8103	F1H0J1050018	1uF 6.3V	[M]
FL8104	F1J1E1040022	0.1uF 25V	[M]
FL8421	F1H0J1050018	1uF 6.3V	[M]